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PHYSICIAN PAYMENT REVIEW COMMISSION

ANNUAL REPORT TO CONGRESS

1992

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PREFACE

In 1986, the Congress established the Physician Payment Review Commission to advise it on Medicare policies for paying physicians. Each year since then, the Commission has prepared an annual report to Congress drawing on analyses conducted by its staff and outside experts as well as input from groups representing physicians and other health professionals, consumers, payers, and others affected by its work. Each report has contained recommendations for policy change, and the Commission has assisted the Congress in translating those recommendations into program reform.

This is the Commission's sixth annual report to Congress. Each year, as it is being prepared, the Commissioners and the staff have an opportunity to reflect on the important contributions that many organizations and individuals have made to their work. During the past year, staff of the Congress, the Health Care Financing Administration and other agencies within the Department of Health and Human Services, the Congressional Budget Office, the Congressional Research Service, the General Accounting Office, the Office of Technology Assessment, and the Prospective Payment Assessment Commission generously shared information and advice.

Social and Scientific Systems, especially Jansen Davis, Paul Menick, and Arlene Turner, continued to provide outstanding programming support for many Commission projects. The editing of the report by Lynn Lewis again proved to be extremely useful to the staff.

This year, the Commission brought together experts in several areas to advise it on physician payment issues and other aspects of health care reform. The Commission drew heavily on the advice of an interspecialty panel of physicians in formulating its recommendations on improving the accuracy of relative work values to be used in the Medicare Fee Schedule. It is very appreciative of the time and hard work that panel members devoted to this project. The members of the Advisory Panel on Access to Care gave the Commission staff excellent guidance in developing and implementing its work plans on monitoring access under the Medicare Fee Schedule. Progress on the Commission's work on practice expense was greatly assisted by participants in a meeting to review outstanding research issues. And, the Commission's work on profiling benefitted immeasurably from the excellent contributions by participants in its Conference on Profiling and the insights of participants in a post-conference discussion group.

Each year the Commission both seeks the advice of and provides the opportunity for comment on its work to organizations concerned with issues related to physician payment policy and health care reform. It considers the information provided through formal testimony, comments on draft chapters, and numerous interactions with Commission staff most valuable in enhancing its understanding of the issues it addresses.

The Commission would also like to express special thanks to the following people who were particularly helpful in its work during the past year: Howard Bailit, Robert Berenson, Jill Bernstein, Randall Bovbjerg, Donald Brand, Peggy Brink, Robert Brook, Katherine Bryant, Peter Budetti, Kathleen Buto, Marge Cahn, James Cannon, Howard Champion, Mark Chassin, J. Jarrett Clinton, Janet Corrigan, William Crawford, Robert Derzon, Robert Dubois, David Eddy, Lynn Etheredge, Judith Feder, Marilyn Field, Emily Friedman, Patricia Gabow, Donald Gann, David Gans, Marsha Gold, Lawrence Gottlieb, Sheldon Greenfield, David Greer, Betsy Humphreys, Karen Ignagni, Carol Jimenez, Stanley Jones, Terry Kay, John Kelly, Kathy King, Susan Kladiva, Steve Lazarus, Sheila Leatherman, Jesse Levy, Kathleen Lohr, Carole Magoffin, Carron Maxwell, Kathleen McCormick, Barbara McNeil, Walter McNerney, Kathleen Means, Michele Melden, Laura Morlock, Laura Mueller, Albert Mulley, Katherine Oates Murrey, Greg Nycz, Bernard Patashnik, Sarah Pedersen, Lois Quam, Trish Riley, James Rodgers, Stephen Schoenbaum, Steven Schroeder, Richard Sharpe, Al Siu, Stephanie Spernak, Sherry Terrell, Bruce Weinstein, Linda Johnson White, Frederick Wenzel, Mark Wynn, and Don Zais. Special thanks also go to Maureen Morrow and Curt Mueller whose work with the Commission staff is reflected in several chapters of this report.

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March 1992

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EXECUTIVE SUMMARY

Six years ago, the Congress created the Physician Payment Review Commission to advise it on physician payment under the Medicare program. At that time, concern was growing over the escalation in program expenditures for physicians' services; beneficiaries' increasing financial liability; and the fact that Medicare's method of paying physicians on the basis of their historical charges had severely distorted the pattern of relative payment across different physician specialties, services, and geographic areas. Moreover, many also saw a need for the medical profession to address issues of apparent inappropriate and variable utilization of medical services.

The Commission recommended a set of proposals to respond to these problems, which served as the basis for the physician payment reform provisions enacted by the Congress in the Omnibus Budget Reconciliation Act of 1989 (OBRA89). The major elements of the comprehensive law include the Medicare Fee Schedule, limits on the amounts physicians may charge beneficiaries above the Medicare approved fee, and Volume Performance Standards (VPSs) to control expenditure growth. The legislation also expanded federal funding for effectiveness research and the development of practice guidelines.

The enactment of physician payment reform ushered in a new era for Medicare, but many expect the changes will have a more widespread impact. Already, a number of private payers and state Medicaid programs are giving serious consideration to adopting a similar method of paying physicians. In looking further into the future, many see the Medicare payment model as an essential part of comprehensive health care reform. With Medicare's physician payment system in its early stages of implementation, the national policy agenda has shifted to focus on concerns regarding both the absolute level and rate of growth of national health care expenditures as well as barriers to access faced by many of the nation's citizens. Consideration of broader system reform has been accompanied by a growing recognition of the limitations of exclusive reliance on financial incentives to control expenditures and ensure appropriate use of services.

Reflecting this new context, the Commission's 1992 report to the Congress represents both a continuation of its past work on design and refinement of Medicare physician payment reform and consideration of a broader set of interrelated policies affecting the financing, quality, and delivery of health services. Several chapters address aspects of the Medicare payment reform: refining the Medicare Fee Schedule, ensuring financial protection and access to care for beneficiaries, and revising the method used to incorporate practice expense into the fee schedule. These chapters are followed by chapters that focus on access to care for people living in areas with a shortage of health care professionals and for Medicaid beneficiaries. The remaining chapters cover issues that affect the entire health care system. These include reforming the medical malpractice system, developing practice guidelines that improve quality and contain cost, enhancing the profiling of providers, improving data needed for cost containment and quality assurance, training physicians to meet the nation's needs, and managing care.

REFINING THE MEDICARE FEE SCHEDULE

After two years of preparation, the Medicare Fee Schedule was implemented on January 1, 1992. The Commission applauds the Health Care Financing Administration (HCFA) for completing the mammoth task that included determining the values of services relative to one another for about 5,500 codes, adjusting for differences in costs among geographic areas for about 230 localities, and establishing national payment policies for surgical services.

The fee schedule meets many of the expectations established by the Congress in enacting payment reform. Simulations prepared by the Commission show that a substantial redistribution of Medicare's payments to physicians is under way. In general, payments for evaluation and management (EM) services (and those specialists who largely provide such services) will be higher under the new fee schedule, while procedural services will be lower. Estimates of the magnitude and direction of change are similar to those that the Commission developed with preliminary data in 1989, which were used by the Congress when it wrote the payment reform legislation (PPRC 1989). Although the transition to the fee schedule will not be complete until 1996, more than half of the realignment in payment rates will already have been accomplished in 1992. This is due to both the implementation of provisions in OBRA89 and OBRA90, which moved many fees in the direction of resource-based payments during 1990 and 1991, and a fee schedule transition formula that calls for significant changes in 1992.

Reports in the media suggest that many physicians have found the payment rates to be lower than expected. This may reflect a number of aspects of the policy, including the unexpectedly low dollar conversion factor that translates relative values into fees; the impact of not paying for interpretation of electrocardiograms (EKGs); discounted payments for new physicians; and some aspects of the payment reform that are less well-understood, such as the absence of a transition for the elimination of specialty differentials. In addition, the implementation of new visit codes increases physicians' uncertainty about how their revenues will change.

While the broad effects of payment reform are progressing in line with congressional intent, issues related to coding, payment policies, and relative values remain. Some of these will have a substantial impact on certain physicians and threaten the system's ability to make equitable and acceptable payments to them. With HCFA committed to continued refinement of the Medicare Fee Schedule, the Commission believes that problems anticipated by different specialties or groups of physicians are better solved by further refining the fee schedule than by creating exceptions or exemptions for narrow classes of providers.

Furthermore, issues such as compensating physicians for the costs of medical education, research, or uncompensated care should be addressed separately from refinement of the fee schedule.

In defining global payment policies for major and minor surgery, HCFA has made substantial progress in distinguishing clearly which services belong in which category and allocating payment in ways that accurately reflect the appropriate bundle of services. The Commission does remain concerned that physicians may not understand how the policies apply and urges an increased effort to educate both physicians and carriers. It is also important for HCFA to refine and clarify its payment policies for special types of surgery, such as trauma surgery that routinely involve multiple operations and more than one physician providing care.

Coding issues still present difficulties. The Commission remains especially concerned about coding for evaluation and management services. With content descriptions and typical times often not congruent, the new codes may send mixed messages to physicians and carriers concerning what is the appropriate code for a given service. The Commission plans to monitor use of the new visit codes to determine whether the goals of coding reform — using codes in a predictable and uniform manner — are being accomplished.

The assignment of accurate relative values remains a key issue as well. In assessing the refinements published in the Final Rule, the Commission has found that significant improvements have been made. It is pleased that HCFA has established an ongoing process for reviewing relative values that may remain out of line (*Federal Register* 1991b). A particular area that needs more attention is the pattern of relative work values for EM services, especially the differences in intensities (work per unit of time) for different visit classes. Currently, virtually the same intensity is assigned for all types of visits in the office and the hospital. The two exceptions are a substantially lower intensity for initial inpatient consultations and a substantially higher intensity for inpatient follow-up consultations. This pattern is inconsistent with both analysis of survey data and the opinions of clinicians obtained through a structured consensus process.

The absence of patient factors, such as severity of illness, may present an additional obstacle to equitable payment. The introduction of a Medicare adjuster and research on the feasibility of incorporating a severity modifier would help address this issue.

HCFA will reduce the practice expense relative values by 50 percent for selected services that are provided primarily in physician offices when those services are delivered in hospital outpatient departments. This site-of-service differential reflects the fact that hospitals furnish and are paid for some resources required in performing these services. The Commission applauds HCFA's effort to introduce site-of-service differentials into the fee schedule, but suggests that it should attempt to develop service-specific estimates of practice expense differences by site. In the longer term, the Commission supports basing the practice expense component of the fee schedule on estimates of the resources required to provide individual services instead of historical charge levels as specified in OBRA89.

OBRA89 called for the initial conversion factor for the fee schedule to be budget neutral. HCFA initially proposed an unexpectedly low amount of $26.87, which according to its interpretation of the law was required to maintain budget neutrality (*Federal Register* 1991a).[1] Various factors affected HCFA's calculation of the conversion factor, including its interpretation of how to adjust payments to maintain budget neutrality and its assumptions about physician responses to changes in payment rates. The Commission previously recommended changes to restore the conversion factor to a level more consistent with congressional intent. The final conversion factor of $30.42 (updated to $31.00 for 1992) reflects numerous modifications in its calculation. But it still includes an adjustment for an estimated 6.5 percent net increase in the volume of services that HCFA assumes will occur in response to changes in payment rates. The Commission regards the magnitude of this adjustment as excessive.

The Commission also recommends changes that will require congressional action in several areas. Specifically, the Commission recommends separate payment for EKGs, elimination of differential payment for new physicians, and resource-based payment for assistants-at-surgery.

As increasing numbers of other payers incorporate elements of the Medicare Fee Schedule into their own policies, the importance of broadening the applicability of the fee schedule beyond Medicare is heightened. Already some state Medicaid programs and private payers are taking steps to adopt fee schedules based on Medicare relative values, a trend that seems certain to continue. Adjustments to relative values or new relative values are needed for services provided to certain distinct patient populations — such as obstetrical services and services to children — and for services not covered by Medicare — such as some preventive services.

The prospects for use of major elements of the fee schedule beyond Medicare highlight the urgency of refining the fee schedule. While HCFA is continuing to improve its refinement process, it should take further steps to make certain that the process is an open one, with disclosure of the basis for making changes. The process should include the wide spectrum of interested parties that will be affected by the refinement of the Medicare Fee Schedule and its broader use — physicians, other practitioners, consumers, private payers, and Medicaid programs.

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[1] This amount was for 1991. No update for 1992 was calculated.

ENSURING FINANCIAL PROTECTION AND ACCESS TO CARE FOR BENEFICIARIES

The Congress has long recognized that Medicare beneficiaries have an important stake in physician payment reform. It has devoted considerable attention to ensuring that policies are designed and implemented to safeguard access to care and to protect beneficiaries from significant financial hardship. In OBRA89, the Congress adopted limits on the amount physicians may charge beneficiaries above the fee schedule amount. When the three-year transition for these limits is complete in 1993, charges will be limited to 115 percent of the fee schedule payment to nonparticipating physicians (109.25 percent of the payment to participating physicians).

Commission simulations project that charge limits will substantially reduce beneficiaries' out-of-pocket costs. Aggregate payments for balance bills are projected to be reduced by 74 percent — roughly $1.5 billion per year — by 1993. The percentage of beneficiaries with balance bills in excess of $500 in a year is projected to decline from slightly over 2 percent to near zero.

Ensuring Financial Protection

To ensure that the promise of financial protection under the payment reform is realized, changes are needed in the law, in the dissemination of information about the charge limits, and in enforcement. Current law does not specify that beneficiaries are not liable for amounts physicians bill above Medicare charge limits or that physicians should refund any excess amounts paid. To ensure that beneficiaries do receive the financial protection envisioned in the payment reform, the Congress should amend the Medicare statute to clarify that beneficiaries are not liable for amounts billed above the limiting charge. Language should also be added that requires physicians to refund to beneficiaries any amount above the legal limit.

The Commission enthusiastically supports HCFA's plan to include the charge limit on the Explanation of Medicare Benefits form in 1993 and considers it to be a critical element to the successful implementation of charge limits.[2] But additional educational efforts are needed, and the Congress should instruct HCFA and its carriers to disseminate information about the limiting charge policy more widely to beneficiaries and physicians. Organizations representing physicians and beneficiaries should also take steps to educate their members about Medicare policies.

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[2] The Explanation of Medicare Benefits form informs beneficiaries about charges for physicians' services they received, Medicare payments on their behalf, and amounts they owe.

To back up these educational efforts, carriers should be directed and funded to screen all unassigned claims to determine if charges exceed the limits. Changes in computer systems required for implementation of other payment policies would make the addition of this screen relatively simple for carriers to undertake. The program should also notify physicians each time the charge limit is exceeded. This may both improve voluntary compliance and facilitate identification of physicians who "knowingly and willfully" violate charge limits.

The effectiveness of the limiting charge policy also depends on the Medicare program's ability to respond appropriately when charge limits have been exceeded, including the imposition of sanctions when necessary. Currently, there appears to be some uncertainty about which agency within the Department of Health and Human Services (HHS) is responsible for enforcing the charge limits. That authority should be clearly delegated by the Secretary.

Monitoring Access

The Commission will play an active role in monitoring Medicare beneficiaries' access to care under the fee schedule. Maintaining an acceptable level of beneficiary access to care is crucial to the success of Medicare physician payment reform. The new payment system, however reasonable, will not be judged a success if, despite gains in access for some beneficiaries, there are deteriorations for others.

OBRA89 requires the Commission to comment on the Secretary's annual report on beneficiary utilization of and access to physicians' services. In response to this mandate, the Commission has developed plans for monitoring access that will enable it to evaluate the Secretary's report and to conduct research that is complementary to that planned by HCFA. In doing so, it drew on the expertise of an Advisory Panel on Access it convened in 1991.[3]

The Commission's work in the past year has focused on identifying indicators of access that may feasibly be calculated using Medicare claims data. The approach encompasses tracking utilization for specific procedures and for targeted subsets of the population, determining through statistical techniques which changes in utilization are related to changes in the payment system, and interpreting whether changes in utilization reflect changes in access to care. As a general strategy, targeted utilization measures (e.g., hospital admissions that could have been avoided with timely and adequate primary care) will be tracked for vulnerable populations who are most at risk for reductions in access to care.

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[3] The Commission's work plan was spelled out in *Monitoring Access: Report to Congress in 1991* (PPRC 1991b).

While awaiting data from 1992, baseline measures of beneficiary access to care are being calculated using complete Medicare claims data for a sample of 1.5 million beneficiaries for the years 1986 through 1990. Detailed profiles of utilization and access will be presented to the Congress in the Commission's report on access due May 15, 1992.

In subsequent years the Commission will use claims data and survey data, including that from the Current Beneficiary Survey conducted by HCFA and the National Ambulatory Medical Care Survey conducted by the National Center for Health Statistics, to contrast beneficiaries' access to care prior to and after the implementation of payment reform. To help shape this work, it will also consider conducting targeted surveys or focus groups of both beneficiaries and physicians. These activities will both document improvements in access that may result from payment reform and identify problem areas that may require administrative or legislative attention.

PRACTICE EXPENSE RELATIVE VALUES

OBRA89 bases practice expense and malpractice expense relative values on historical charges for individual services and survey data on revenue shares for the specialties that provide these services. The Commission has been working to develop resource-based measures of these inputs. It has devised a method that relies on common accounting principles to split practice expense into two categories: direct costs, which can be attributed to a specific service, and indirect costs, which are common to many or all services. Under this approach, estimates of direct costs come from measurement of resource use by service, while indirect costs are allocated to services in proportion to physician work and direct costs.

A pilot study of this method was conducted with data from a large multispecialty clinic.[4] The study, which is described in detail in a separate report, examined three key issues: the types of data required to develop resource-based relative values; the difficulty in collecting these data; and the decisions and issues that arise throughout the data collection and relative value calculation process (PPRC 1992). The resulting estimates, which are based on data that are too limited to determine actual payment amounts, suggest the broad implications of a resource-based approach.

The analysis shows that the estimated resource-based payment rates would differ substantially from those under the current version of the Medicare Fee Schedule. Roughly one-quarter of practice expense payments would be reallocated. In general, payments for EM services would increase, while payments for procedures would decrease. Services performed in physician offices would generally be paid more; those performed in hospitals and outpatient facilities would generally be paid less.

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[4] Data were obtained from two additional large clinics to study variation in relative resource use across practices.

Analyses were conducted to determine how sensitive these estimates are to changes in the key assumptions (such as compensation rates for staff and billing costs per service) or certain methods used. The estimates had little sensitivity to the assumptions, but were moderately sensitive to the choice of a basis for allocating indirect costs and to the share of practice expenses classified as direct versus indirect.

Two types of research issues are outstanding: those related to data collection and those related to refinement of the resource-based framework. The data collection task that would be required before a resource-based approach could actually be implemented is a substantial one that should be undertaken by HCFA. HCFA is currently sponsoring research on equipment costs and on comparison of practice costs between physician offices and other outpatient settings, such as hospital outpatient departments. The Congress should direct HCFA to collect additional data to test resource-based methods and their implications. The Commission plans to focus its research on several outstanding issues within the resource-based framework, such as the treatment of staff downtime; use of clinical office staff to assist the physician in settings outside of the office; and the choice of mean, median, or efficient costs as the basis for direct cost calculations.

INCREASING THE AVAILABILITY OF HEALTH PROFESSIONALS IN SHORTAGE AREAS

Improving access to health care in rural and inner-city areas depends largely on the successful recruitment and retention of health professionals who provide primary care. Multiple approaches are required to maintain an adequate supply of physicians and other practitioners in these vulnerable areas. Increasing payments to physicians in underserved areas will not by itself alleviate access problems. Measures to expand the medical resources available to physicians in remote areas (for example, telecommunication links with consultants) and continued reliance on nonphysician practitioners and public programs such as community and migrant health centers and the National Health Service Corps should be pursued in conjunction with effective payment policies.

One payment policy that seeks to enhance access to physicians' services for underserved populations is the Medicare bonus payment. Under this policy, physicians receive a 10 percent payment above the Medicare fee for services delivered in Health Professional Shortage Areas (HPSAs). Research suggests that such a bonus is probably more effective in retaining physicians in shortage areas than in recruiting them.

In order to augment the ability of the bonus payment to retain physicians, the Commission recommends two modifications to the current designation of geographic areas in which bonuses are paid. First, in those areas that lose designation as HPSAs, Medicare should continue to provide bonus payments for three additional years. This would counter the instability of the HPSA designation, so that areas that successfully recruit or retain physicians do not immediately lose the bonus payment.

Second, bonuses should be paid in nonmetropolitan counties with poverty rates exceeding 25 percent of the population, regardless of their HPSA status. Although the HPSA designation helps identify where there are current physician shortages, the Commission wants to broaden the bonus to areas that are prone to shortages but that do not now satisfy the HPSA criteria. The Commission plans to examine corresponding improvements in the distribution of bonus payments in inner-city areas.

INCREASING ACCESS UNDER MEDICAID

In its report last year on physician payment under Medicaid, the Commission documented the large difference between Medicaid and Medicare fees, supporting the goal of raising Medicaid fees to Medicare levels to improve access to care (PPRC 1991a). The report noted, however, that since factors other than fees affect physician participation in Medicaid, some geographic areas, particularly in inner-city and rural locales, may remain underserved even with substantial fee increases. Other federal options must be explored that, along with fee increases, could improve access to care. These include expanding federal support to alternative delivery systems — such as community and migrant health centers, hospitals, and schools — that are located in communities where Medicaid beneficiaries live and removing barriers to state efforts to increase the use of managed care.

Alternative Delivery Systems

Community health centers, hospitals, and schools play important roles in providing medical care to Medicaid beneficiaries in both rural and urban areas. Many of those served by these providers have limited access to office-based physicians' services and might continue to even if Medicaid payments were raised. Increased federal grant support could substantially expand the number of Medicaid beneficiaries who could obtain access to care from these alternative delivery systems. Additional federal dollars should be allocated both to fund new community health centers in underserved areas and to expand the capacity of existing centers. Federal funds should also be increased to promote the provision of primary care services by hospitals and schools. Improving Medicaid payments to these providers, comparable to the enhanced payment federally qualified health centers now receive, could also broaden their ability to serve Medicaid beneficiaries.

For these providers to reach their full potential, other barriers must be addressed as well. These include expanding the number of health professionals in the National Health Service Corps, which has been an important source of physicians and other practitioners for community health centers; ensuring availability of liability coverage at reasonable rates; ensuring that community health center staff are able to obtain hospital admitting privileges consistent with their credentials; and removing unnecessary restrictions on nonphysician practitioners.

Medicaid Managed Care

Promoting the use of managed care is yet another policy option that could increase Medicaid beneficiaries' access to care. Health maintenance organizations (HMOs) or primary care case managers that are willing to contract with a state Medicaid program to provide comprehensive services may improve access to care for beneficiaries living in areas where few private practitioners are available to serve those eligible for Medicaid. To the degree that managed care can substitute office-based care for emergency room visits, Medicaid beneficiaries' health problems could be addressed earlier, and they could benefit from greater continuity of care.

Nevertheless, the promise of managed care to improve Medicaid beneficiaries' access is not always realized. When managed-care organizations are paid on the basis of capitation, they have incentives to underserve. Furthermore, because Medicaid beneficiaries are less able to "work the system," they face a greater risk of underservice compared with the general population. Mandating the use of managed care or contracting with plans that specialize in serving Medicaid patients increases these risks even further. As a result, the federal government has placed a number of constraints on Medicaid programs' use of managed care. Among these are a ceiling on the proportion of Medicare and Medicaid beneficiaries served by an HMO, policies favoring federally qualified HMOs over those qualified by the state plan, and requirements that states obtain federal waivers before mandating that beneficiaries receive care in managed-care organizations.

Advances in quality assurance may permit managed care to play a larger role in Medicaid and succeed more often in realizing its potential to improve access to care. The HMO industry has made significant strides in developing procedural, structural, and outcome standards to assure quality. Recently, HCFA initiated a major effort to upgrade quality assurance for Medicaid managed-care programs. If these efforts are implemented successfully, consideration can be given to removing some of the federal constraints on the use of managed care in Medicaid.

Although it is too early for the Commission to make a recommendation to remove federal constraints, it is encouraged by HCFA's quality assurance initiative. If implementation progresses well, the Commission will consider recommendations for concrete steps that could increase the use of managed care in the Medicaid program.

Research Update and Work Plan

Research on the relationship between Medicaid fees and access to care has continued. Data from a new Urban Institute survey indicate that some states raised fees between 1989 and 1990, but that the amount of increases varied across states and across procedures (Holahan 1991). Recent studies have been consistent with past work in suggesting that fee levels do not influence the number of services received. Studies have reached conflicting conclusions on the effect of fees on site of service, however.

The Commission has also considered the impact of the equal access provision of OBRA89, which requires states to demonstrate that their Medicaid fees are sufficient to ensure that services are as available to Medicaid beneficiaries as they are to the general population. To date, this provision does not appear to have prompted systematic changes in either Medicaid fees or other policies, since most states have been able to argue that they meet the requirements of the law. If this provision is to improve access, HCFA will have to develop measures of access appropriate to the Medicaid population and direct states to collect the data needed to monitor whether the requirements of OBRA89 are being met.

In the year ahead, the Commission will explore developing access measures that are suitable for the Medicaid population and that the states could use to meet the requirements of the OBRA89 equal access provision. It will also consider the feasibility of designing and fielding an ongoing survey of Medicaid beneficiaries to provide information on source of care, access barriers, satisfaction, and demographic characteristics. The Commission hopes to learn more about the potential of using primary care case management programs and nonphysician practitioners to improve access.

MEDICAL MALPRACTICE REFORM

The medical malpractice system is expected to both reduce preventable medical injuries and compensate patients when they occur. Both of these goals are compromised by problems with the existing system. Although the quality of medical care is generally high, preventable medical injuries are too frequent and efforts to reduce their occurrence are insufficient. Few patients who are injured by negligence are compensated, and those who are compensated receive awards that are delayed and not consistently calibrated to actual losses. The extent and cost of defensive medicine practices are unknown, but there is concern that they might contribute substantially to inappropriate care and higher costs. The system's administrative expenses are too high, and the cost of malpractice insurance premiums may impair access to care in some circumstances.

The medical malpractice system is compromising federal interests in constraining the rise in health care costs and ensuring access to high quality care. To address the underlying causes of the malpractice system's problems, reforms should pave the way for a dramatically different approach which encompasses separate systems for compensation and deterrence. There would be a system for fast, efficient compensation that would provide adequate payment to patients who experience preventable medical injuries. A parallel system would be put in place for monitoring, quality review, and other measures that would reduce the rate of injury.

Although this system cannot be implemented immediately, its components should be developed now, both to lay the groundwork for its future establishment and to improve the functioning of the present system. The federal government should ensure that practitioners, hospitals, and health care organizations engage in effective injury reduction efforts for inpatient and outpatient care. It should support research to establish and improve systems for data collection, analysis, and design and implementation of effective interventions.

The Congress should authorize and fund the development and assessment of demonstrations of administrative or other systems for compensating patients for negligent medical injuries. The demonstrations should provide information on the features that would be needed in a future compensation system for fast, efficient, and accurate resolution of claims. The Congress should also support the development and testing of standards for determining compensability that would be more reliable than the existing negligence standard.

As part of a broader reform package, the Congress should effect the widespread adoption of certain tort reforms. These include reasonable limits or schedules for noneconomic damages and contingency fees, thresholds for joint and several liability, offset of awards for collateral source payments, periodic payment of large awards, reduction of long statutes of limitations for minors, as well as encouragement of early assessment of claims and use of alternative dispute resolution methods.

Tort reforms are intended to improve incrementally the workings of the current tort system. By limiting the number and size of claims paid, they would lower malpractice premiums in some states. But these reforms alone would not resolve the major problems of the malpractice system. Reducing medical injury and defensive medicine — and their associated costs — is likely to be more dependent on other elements in the package of malpractice reforms included in the Commission's recommendations.

As demonstrations are conducted and reforms are put in place, the Agency for Health Care Policy and Research (AHCPR) should sponsor studies of their effects on patients. Funds for malpractice research should be identified separately in AHCPR's budget.

DEVELOPING PRACTICE GUIDELINES TO IMPROVE QUALITY AND CONTAIN COSTS

Practice guidelines can play a key role in efforts to increase the quality of medical care and contain costs. They can help patients, physicians, payers, and others choose effective approaches to care in an environment of constrained resources. Without information from guidelines, attempts to contain health care costs may reduce the delivery of both necessary and unnecessary services.

The AHCPR and other public and private organizations have made significant progress in the development of practice guidelines. In reviewing what has been accomplished to date, the Commission has identified three areas that should be addressed.

The first is to ensure that practice guidelines are constructed to help address costs as well as quality. This can be done without requiring guideline developers to make value-laden decisions on the trade-offs between costs and benefits of services to patients. AHCPR should give priority to developing guidelines — including guidelines for individual services — on topics that have the potential to reduce the resources being spent on unnecessary services. The agency should specify the elements to be incorporated in guidelines to enable them to be used in different ways to address the cost as well as quality of care. It should also require that all federally sponsored guidelines contain these elements to the greatest extent possible.

The second area concerns how to meet the current pressing need for practice guidelines. Many guidelines have already been produced, but they are of varying quality. AHCPR, working with other groups interested in the development and use of guidelines, should establish a clearinghouse to collect all available practice guidelines; to develop and apply criteria to determine which of them would be useful in the short term in improving the value and quality of care; and to ensure that such guidelines are disseminated widely.

Third, emphasis needs to be given to ensuring that future guidelines are valid and developed by efficient methods. AHCPR should fund research to identify the most effective and efficient methods of producing valid practice guidelines. The Department of Health and Human Services (especially AHCPR) should fund, conduct, and coordinate research to provide the types of clinical information needed for guidelines. In addition, it should fund and facilitate research on whether guidelines help improve patient outcomes and control costs in actual practice.

REALIZING THE POTENTIAL OF PROFILING

Profiling is an analytic tool that provides a means to compare practice patterns of providers on the dimensions of cost, service use, or quality of care. It is increasingly being used in activities related to utilization review, quality improvement, assessment of provider performance, and research into the effectiveness and appropriateness of care. Its expanded use is related to the growing availability of data on which profiling can be based, as well as the spread and improvement of technology for processing this information.

The availability of information may be outpacing the ability to use profiling effectively and responsibly, however. As profiling has become more widespread, diverse groups have raised concerns over the quality of the profiles themselves, the uses to which they have been put, and access to the information contained in them.

In January 1992, the Commission held a conference on profiling to learn what is known about the appropriateness of present uses of profiling and to identify what will be required to realize the full potential of this technique. The participants suggested that current problems with profiling are primarily related to limitations of the underlying data. While work is undertaken to overcome these limitations, there are responsible ways that profiling can be used to meet important needs of physicians, payers, and policymakers.

Profiling appears to be a useful tool for uncovering potential problems with the quality and efficiency of care. When put in the hands of physicians — especially in the context of a structured group process — profiling results can serve as an effective stimulus to action, even when the profiles themselves are imperfect and when the appropriate approach to care is not known. In the course of exploring reasons for variation in profiling rates, physicians can often identify ways to change their practices for the better. This can not only improve the quality of care, but also help physicians respond to the collective incentive of Volume Performance Standards to contain costs.

Profiling can help both payers and physicians by improving the effectiveness and decreasing the intrusiveness of utilization review. It can accomplish the most if it focuses on changing the behavior of not only the outlier physician but also the average physician. This will require payers to convene groups of physicians to review profiling results, at least until practice guidelines and appropriate utilization rates are available.

Physicians will have better information to act upon if claims data become more supportive of profiling. This can be achieved by recording information on all claim forms about physician specialty, patient condition/diagnosis, and the physician who orders or refers each service and by linking administrative databases across payers.

Achieving the short-term and long-term goals of profiling requires an infrastructure capable of supporting three complementary activities:

- data collection, dissemination, and analysis;

- the convener function, by which providers come together to review profiling results in the context of a structured group process; and

- interaction of providers, payers, and consumers.

In the coming year, the Commission will explore initiatives in the public and private sectors to identify models best suited to furthering the goals of profiling.

IMPROVING DATA TO SUPPORT COST CONTAINMENT AND QUALITY ASSURANCE

The lack of timely, comparable data has been a barrier to efforts to understand and manage the provision of health care services. Increasingly, for instance, efforts to achieve cost containment and quality assurance require information drawn from many payer and provider sources that is not readily available. Some important objectives that have been hampered by the existing data environment are improving the administrative efficiency of health service payment systems, monitoring the provision and cost of health care services, profiling, and effectiveness research.

The Commission is beginning to examine how the shared needs of both public and private entities in these areas can be met in a comprehensive way. At a minimum, this would entail national standards for recording and processing data, along with protocols for using data at local, regional, and federal levels. The implementation of these standards would make it feasible to consider appropriate elements of public and private health care data as components of a comprehensive all-patient database, regardless of where they reside.

The initial goal of an all-patient approach is to establish a solid frame of reference for administrative data maintained in any health information system. This might include defining a uniform set of required data elements, codes and definitions to describe that information, and data quality standards that all payers and providers use. Standards such as these might be sufficient to facilitate the use of data across sources. It is more likely, however, that some type of formal network will be needed to accomplish a wide array of objectives efficiently.

In any case, there would not be one central data bank under this approach. Instead, a network of local or regional data processing centers could be established to streamline the transfer of administrative (claims) data for payment and service-use tracking purposes. Parallel organizing entities could be established to coordinate the use of these data to meet local, state, or national needs. As an all-patient data network evolves, it could provide a means to link and assimilate more detailed clinical information on an "as-needed" basis.

The development of a formal strategy to establish an all-patient database will require careful consideration within the context of many mutual and competing interests among both public and private constituencies. Essential aspects that need to be considered include the core data that are identified and defined to initiate the strategy as well as the nature and composition of the network established to facilitate the use of data.

The Commission will continue to look at ways in which the federal government could play a role in these efforts. For example, it will examine the nature and composition of a central coordinating authority to promulgate specific data priorities and standards. At the same time, it will assess representative models for a network both to improve the transfer of data and to provide a means to organize the use of data resources at the local level. The Commission will also continue to explore ways in which clinical data and related data systems can be improved.

TRAINING PHYSICIANS TO MEET THE NATION'S NEEDS

Under OBRA90, the Congress directed the Commission to review and consider the number and practice specialties of physicians in training and Medicare payments for graduate medical education. While federal policymakers have long been interested in ensuring an appropriate number and mix of health professionals to meet national health needs, this directive reflects a different focus. In particular, there are heightened concerns that growth in aggregate physician supply and imbalance in the distribution of physicians across specialties may stand in the way of other system reforms to contain costs and to encourage delivery of more cost-effective and appropriate care.

Over the past year, the Commission has spent considerable time reviewing data on physician supply and distribution; studying related public and private sector efforts; examining the impact of previous policy initiatives; and hearing from physicians, policy experts, medical educators, and others knowledgeable in these areas. From these activities, the Commission has developed three working assumptions:

- The number of physicians exceeds, or will soon exceed, that required to meet national health care needs.
- The nation is training too many medical subspecialists and too many specialists in some surgical fields relative to the number of primary care physicians.
- Many residents are not obtaining appropriate training experiences to prepare them for practice outside of the hospital.

The Commission has also concluded that despite some small successes, past policy efforts have not achieved the goals of slowing growth in aggregate supply and shifting specialty distribution toward primary care. And while the need for more ambulatory care training has been much discussed, residents continue to spend most of their time in inpatient settings.

Past efforts were unsuccessful because they were undermined by other policies that created incentives for continued growth in residency positions, particularly in medical subspecialties. These policies include financing graduate medical education through payment for inpatient services and distortions in the pattern of payment for physicians' services.

To slow growth in aggregate supply and reach a more appropriate balance in specialty distribution, the number of residency positions, particularly in subspecialty fields, must be reduced. In addition, the residency experience should be reoriented to ensure that trainees are prepared to detect and treat disease as it presents in the population they will encounter in practice outside the tertiary care center.

The continued reliance of teaching hospitals on residents to meet clinical service needs is a major impediment to achievement of these goals. In the year ahead, the Commission will explore issues that must be addressed to overcome this obstacle. It will assess factors motivating institutions to establish training programs and consider options that would enable teaching institutions to meet their essential service needs as graduate medical education is restructured.

MANAGING CARE: BEYOND THE RHETORIC

Managed care has become a popular term for an increasingly varied series of options to integrate the financing and delivery of health care. While group-model and staff-model HMOs continue their growth, a variety of more loosely structured arrangements have accounted for an increasing proportion of this market. Many private payers, together with some policymakers, researchers, and editorial writers, see managed care as a way to reduce costs and maintain high-quality care. At the same time, critics argue that it is dangerous to view managed care as a panacea, charging that it provides strong incentives for underservice or the provision of inadequate, poor-quality care, all in the name of cost containment. These critics are particularly concerned about the role of managed care in public programs that serve the poor and the elderly, where enrollees may lack the means to learn the system and protect themselves against plans that do not adequately assure quality.

The Commission is attempting to examine the essentials of managing care, whether that care is delivered in a solo practitioner's office on a fee-for-service basis, in a staff-model HMO, or in one of the hybrid forms introduced in recent years. Elements of managing care fall generally under three different approaches: selecting providers, restricting clinical choices, and inducing changes on the part of providers. Specific techniques considered include provider networks, utilization review, primary care gatekeepers, financial incentives, the use of profiling and outcomes research, and continuous quality improvement.

Managed care should be distinguished from managed competition and other proposals for health care reform that focus on how consumers choose among competing health plans. The Commission's interest in managing care is focused on how health plans attempt to alter the nature of the care that is delivered and on the impact of managed care on cost and quality.

Only limited research is available to identify the impact of managed care on costs and quality. Results are largely inconclusive, although they indicate that some managed-care features, under some of the more tightly managed variants of HMOs, can lead to significant cost reductions and deliver high-quality care.

In the year ahead, the Commission plans to consider goals for managing care and to assess different approaches in terms of those goals. An equal concern is the organizational environment that best fosters effective management, specifically whether HMOs and other organized group practices hold an advantage over less structured environments. This analysis will then allow the Commission to consider the characteristics of an effectively managed health system and to assess the potential for increasing the appropriate use of physicians' services through managed-care approaches.

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INTRODUCTION

This report both represents a continuation of the Physician Payment Review Commission's past work on design and refinement of Medicare physician payment reforms and marks a turning point as the Commission begins to focus on a broader set of interrelated policies affecting the financing, quality, and delivery of health services. It reflects the challenge of ensuring that patients receive appropriate and cost-effective care in an environment of constrained resources.

Since the Commission was created in 1986, its mandate has evolved continually to reflect the policy concerns of the Congress. In 1986, the Congress set its sights on creating a more rational and cost-effective approach to Medicare physician payment. It asked the Commission to consider relative payments across different types of services and different geographic areas, as well as the prices paid by beneficiaries — particularly charges in excess of those allowed by Medicare.

In 1987, the Congress returned to the Commission with an additional charge: to consider policies to slow increases in spending for and use of Medicare physicians' services. Since then, the Commission's work has focused on developing options to contain costs while pursuing opportunities to increase access to care and improve its quality. In 1989, the Commission recommended a policy framework for achieving these goals by linking financial incentives for cost-effective practice with the development and dissemination of information on appropriate care of patients. Those recommendations, reflected in the 1989 Medicare payment reform legislation, included a resource-based fee schedule, limits on charges to beneficiaries, expenditure targets to slow growth in spending, and federal support for outcomes research and the development of practice guidelines.

With the passage of the payment reform legislation in 1989, the Commission assumed new responsibilities for advising the Congress on both implementation of the Medicare Fee Schedule and the evolution of the Volume Performance Standard mechanism. The Commission also was called on to make annual recommendations on Volume Performance Standards and fee updates as well as to monitor beneficiaries' access to care.

Since then, the policy agenda has shifted to concerns about rising national expenditures for health care and about barriers to access for many of the nation's citizens. In 1990 that shift in priorities was embodied in the most substantial expansion in the Commission's mandate to date.

The scope of the Commission's work was significantly expanded to encompass both issues beyond payment and a set of payers beyond Medicare. The Commission must now advise the Congress on Medicaid payment policies as they affect access to care for inner-city and rural populations as well as consider options for controlling costs faced by employer-based health plans. This broader mandate makes the Commission's work particularly relevant to congressional deliberations about national reforms in the organization and financing of health services.

The new mandate, which also extends beyond payment issues, charges the Commission to consider additional factors that must be addressed to promote cost-effective care, thus acknowledging the limitations of exclusive reliance on financial incentives to control expenditures and ensure appropriate use of services. Physician supply and specialty distribution, training, licensure and certification all determine whether the available pool of physicians has the requisite knowledge and skills to provide appropriate care in a cost-effective manner. The success with which new information about cost-effective care is translated into practice will be affected by policies related to developing practice guidelines, profiling physicians' practice patterns, providing physicians with feedback on their performance, and reforming the medical malpractice system.

As the Commission has conducted its work, it has recognized the need and benefit of paying particular attention to integrating its analyses across policy areas. Important elements of many of these issues are interrelated, and the success of policy changes in any area will be influenced by the extent to which reforms are compatible. The challenge has been to focus on the important issues within each policy area while developing approaches that are consistent across all of them.

In this report, the Commission has attempted to bridge its work on the specifics of Medicare physician payment reform with these newer responsibilities. It has devoted considerable attention to refinements that will ensure equitable payment, beneficiary financial protection, and access to care under the recently implemented Medicare Fee Schedule. The Commission also continues its work on access to care for underserved populations in chapters on Medicaid and improving the availability of health professionals in shortage areas. Extending the goals of payment reform beyond financial incentives and the Medicare program itself is considered in chapters on medical malpractice reform, practice guidelines, profiling physician practice, improving the collection and linking of data, training physicians, and managing care.

CHAPTER 1

THE CONTEXT FOR REFORM

Six years ago, the Congress created the Physician Payment Review Commission to advise it on physician payment under the Medicare program. At that time, concern was growing over the escalation in program expenditures for physicians' services; beneficiaries' increasing financial liability; and the fact that Medicare's method of paying physicians on the basis of their historical charges had severely distorted the pattern of relative payment across different physician specialties, services, and geographic areas. Moreover, many also saw a need for the medical profession to address issues of apparent inappropriate and variable utilization of medical services.

The Commission recommended a set of proposals to respond to these problems, which served as the basis for the physician payment reform provisions enacted by the Congress in the Omnibus Budget Reconciliation Act of 1989 (OBRA89). The major elements of the comprehensive law include the Medicare Fee Schedule, limits on the amount physicians may charge beneficiaries above the Medicare approved fee, and Volume Performance Standards (VPSs) to control expenditure growth. The legislation also expanded federal funding for effectiveness research and the development of practice guidelines.

The enactment of physician payment reform ushered in a new era for Medicare, but many expect the changes will have a more widespread impact. Already, a number of private payers and state Medicaid programs are giving serious consideration to adopting a similar method of paying physicians. In looking further into the future, many see the Medicare payment model as an essential part of comprehensive health care reform. With Medicare's physician payment system in its early stages of implementation, attention has begun to shift to issues of broader reform. The call for measures to address health care expenditures at the national level has intensified as concerns mount over both the absolute level of spending for health care and the rate of growth in expenditures.

This chapter provides a background for understanding the forces that led to payment reform and a context for the analyses and recommendations included in this report. Trends in Medicare outlays and beneficiary cost sharing are first presented. An overview of the changes that have been enacted and refined to address the problems follows. Finally, to set the stage as the Commission begins to respond to its broader mandate from Congress and look beyond physician payment under Medicare, issues relevant to more comprehensive health system reforms are raised.

THE CALL FOR REFORM

When the Commission began its work in 1986, consensus was building among physicians, beneficiaries, and policymakers that a major restructuring of physician payment under Medicare was in order to replace what many considered an inequitable and inflationary system. In 1983, Medicare's method of paying hospitals under Part A of the program had been significantly overhauled to address rising costs. It was clear that the time had come to bring Medicare's spending for physician services — which comprise 70 percent of Part B expenditures and more than 25 percent of total Medicare expenditures — under control as well. The lack of a rational basis for determining fees, acceleration of program outlays, and the erosion of financial protection for beneficiaries were issues that had to be addressed.

Distortions in Payments to Physicians

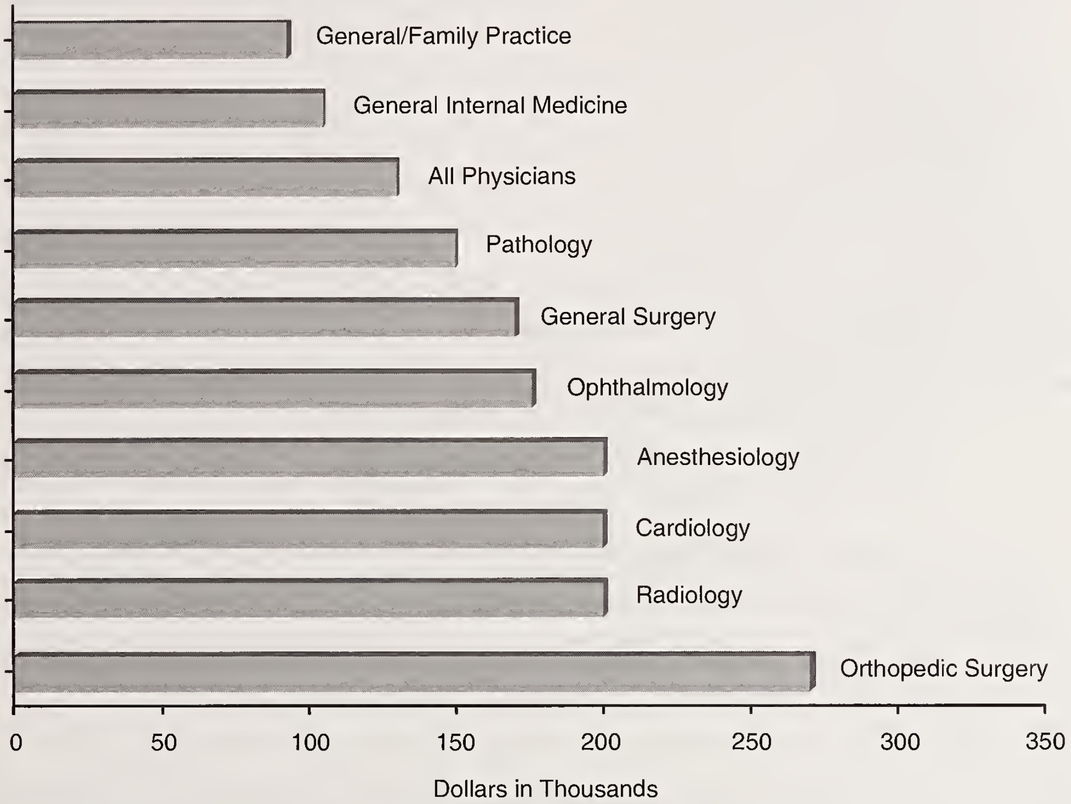
Pressure for payment reform arose in part from criticisms that Medicare's method of paying physicians, referred to as "customary, prevailing, and reasonable" (CPR), had created wide variations in payments among types of procedures, localities, and specialties that could not be attributed to differences in costs of practice. Under the CPR method, the payment for each service is determined by what the physician has charged in the past (customary) and what other physicians in the locality and specialty charge (prevailing). The reasonable, or allowed, charge is the lowest of the actual charge, the customary charge, and the prevailing charge.

A number of problems associated with the Medicare CPR system are noteworthy. First, surgical and technical procedures became increasingly overvalued relative to visits and consultations. This contributed to marked disparity between the incomes of primary care practitioners and other physicians (Figure 1-1). The distortion in payments may have also contributed to the rapid growth in the provision of surgical and technical procedures compared with visits and consultations (Table 1-1). A second problem is that two physicians who provided identical services may have received considerably different payments because fees were based on the individual's past charges. Finally, administration of the system, which required maintaining individual charge profiles for physicians, was complex, time-consuming, and costly.

Growth in Expenditures

Since the enactment of Medicare in 1965, spending for physicians' services has increased at an average annual rate of more than 13 percent. This rate peaked during the first half of the 1980s, averaging 18 percent annually (Board of Trustees 1991). Increases in expenditures for Medicare physicians' services have outpaced growth in the gross domestic product (GDP), national health expenditures, and Medicare Part A expenditures (Figure 1-2). The only growth trend that surpasses Medicare physician expenditures is total Part B outlays, due to the substantial growth in volume of outpatient services in recent years.[1]

Figure 1-1. Median Physician Net Income, After Expenses, Before Taxes, 1990



Source: American Medical Association, Socioeconomic Monitoring System

Almost a quarter of national expenditures for physician services flows from Medicare, up from 19 percent just 10 years earlier (Figure 1-3). From 1981 to 1991, Medicare payments for physicians' services increased from $8 billion to $26 billion. They are projected to rise to $46 billion by 1996 (HHS 1992). This rise in expenditures is primarily a result of increases in price per service and in volume and intensity of services, reflected in the growth of physician charges per beneficiary: Between 1981 and 1991, average annual incurred charges per Medicare beneficiary in constant 1991 dollars nearly doubled, climbing from $658 to $1,205 (Figure 1-4).

In recent years, rising prices have figured less prominently in outlay growth due to Medicare price constraint policies, discussed below. Growth in volume and intensity of services has

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[1] The adoption of the prospective payment system as a means of paying hospitals under Medicare created incentives to provide services on an outpatient basis rather than an inpatient basis.

Table 1-1. Annualized Increase in Volume for Procedure Groups, 1986-1989

Procedure Group	Percent
Medical Eye Services [a]	18.0
Other Medical Procedures [b]	17.0
Lab Services	16.4
Cardiac Services	13.4
Endoscopies [c]	11.4
Diagnostic Imaging	10.5
Surgery	7.4
Visits and Consultations	5.6

Source: PPRC analysis of 1986-1989 BMAD I data.

Note: [a] Medical eye services include visits and medical procedures for the eye. Cataract and lens replacement surgery is included in the surgery category.

[b] Other medical procedures include gastroenterology, pulmonary, otolaryngology, immunization, and other services.

[c] The endoscopies category excludes transurethral resection of the prostate (TURP).

remained fairly stable but has accounted for an increasing proportion of expenditure growth because of constraints on prices. The increase in the number of elderly and disabled beneficiaries enrolled in Part B, currently 33 million, has had only a modest effect on total outlays (Figure 1-5).

Medicare continues to draw an increasing share of public resources. Total Medicare payments (physician, hospital, and other services) now account for 8 percent of the federal budget, up from 6 percent in 1981. This share is projected to swell to 12 percent by 1997. Medicare's growing prominence in the federal budget is especially troublesome at a time when the federal budget deficit looms ever larger and competing needs expand in areas such as education, transportation, the environment, and housing. While the rate of growth in virtually all categories of federal outlays is expected to decline over the next four years, federal health expenditures, led by Medicare, are projected to increase (Figure 1-6).

Increasing Financial Burden on Beneficiaries

Medicare is a major source of financial security for the elderly who, even with Medicare coverage, spend a large portion of their income — approximately 17 percent — on health care (Families USA Foundation 1992).[2] Medicare's ability to offer financial protection to the

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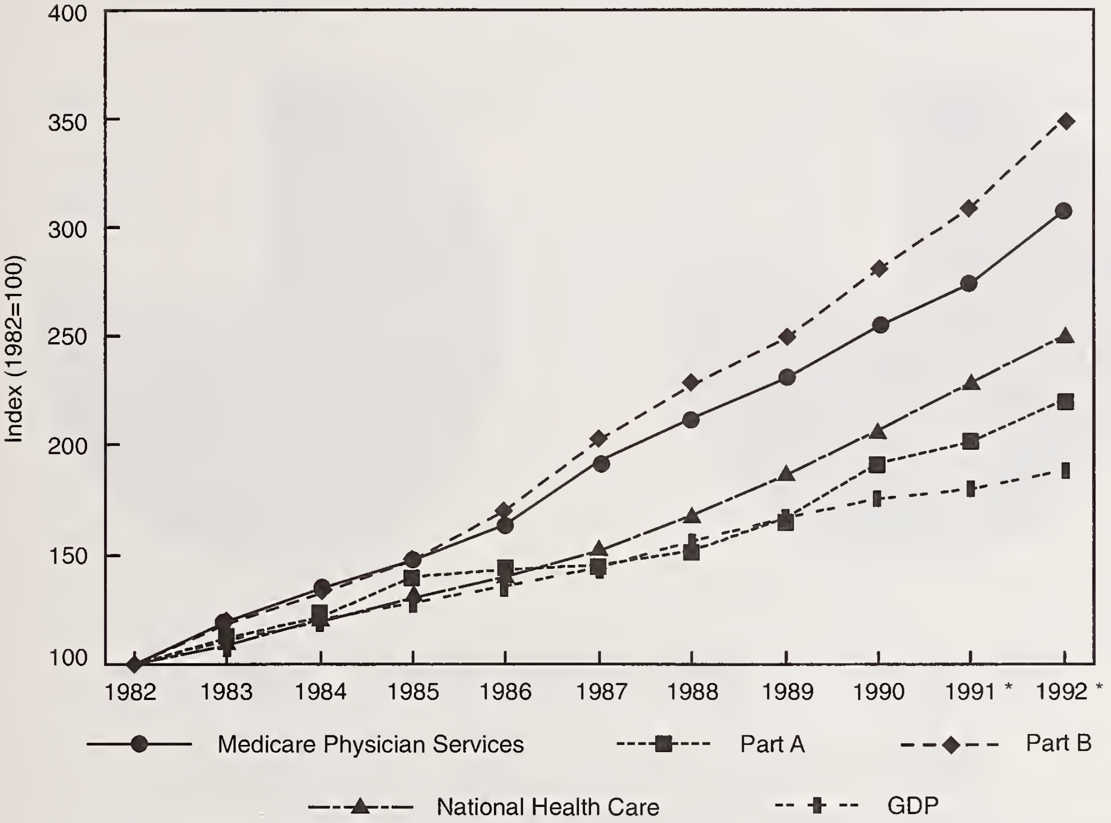
[2] This percentage reflects out-of-pocket health expenditures for a household headed by someone age 65 or older.

Figure 1-2. Trends in Gross Domestic Product and Expenditures for Medicare and National Health Care, 1982-1992



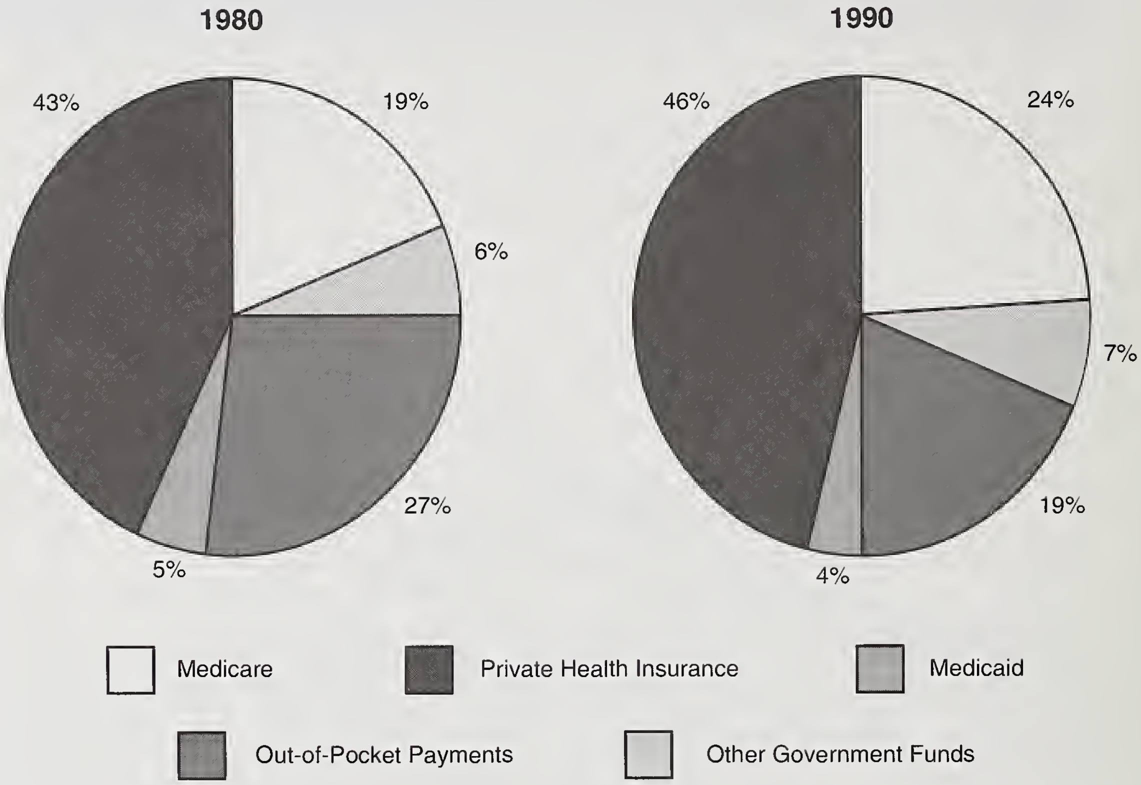
Source: Health Care Financing Administration, Office of the Actuary; U.S. Department of Commerce

Note: * represents projections.
Gross domestic product is equal to gross national product less net property income from abroad.

elderly has been challenged by the steady rise in health care costs that has increased out-of-pocket spending by beneficiaries (Figure 1-7). Over the past 20 years, Part B monthly premiums, deductibles, copayments, and balance bills have absorbed an increasing amount of beneficiaries' income. These costs come on top of other substantial out-of-pocket expenses for health care, including Part A deductibles and coinsurance and payments for services not covered by Medicare like prescription drugs, eyeglasses, and long-term care (Table 1-2).

Most Medicare beneficiaries have some form of supplemental insurance, which provides varying degrees of coverage for Medicare copayments and services not covered by Medicare. Approximately 30 percent of beneficiaries have employment-based plans, while another 30 percent have individually purchased plans, known as Medigap policies. Almost 10 percent of the elderly qualify for full Medicaid coverage, and an additional 10 percent have limited or "qualified" Medicaid benefits, which cover Medicare coinsurance and deductible amounts.

Figure 1-3. Expenditures for Physicians' Services by Source of Funds



Source: Health Care Financing Administration, Office of National Health Statistics.

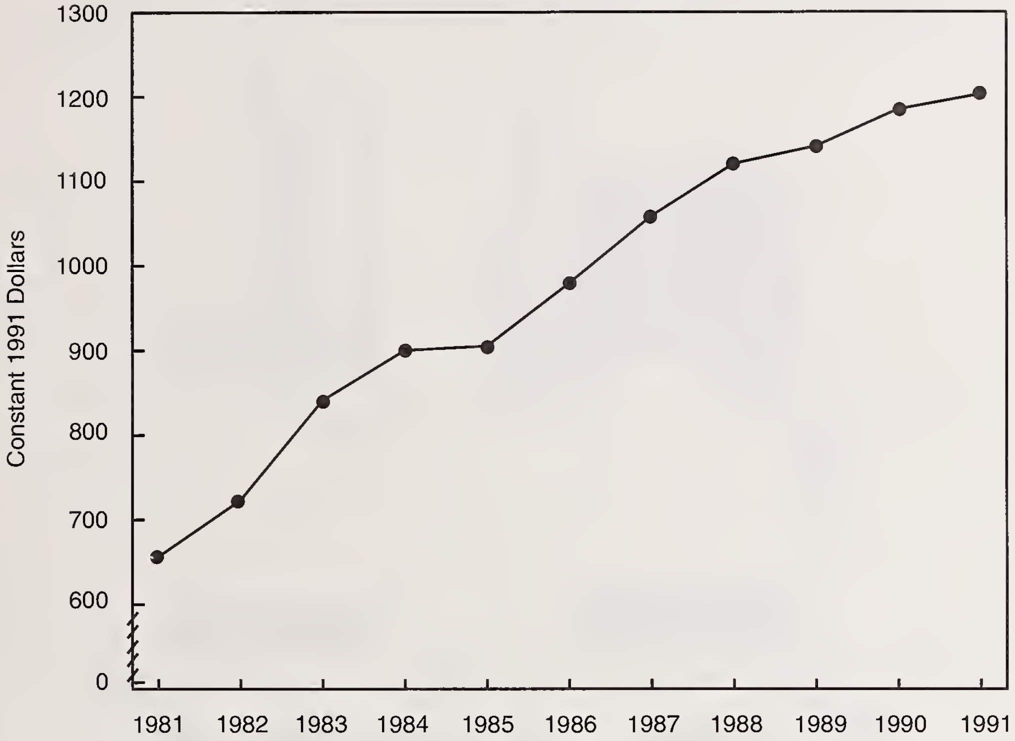
The remaining 20 percent of Medicare beneficiaries lack any form of supplementary insurance, which puts them at greater risk of incurring considerable out-of-pocket costs.

THE ROAD TO REFORM

With discontent mounting over the inadequacies of Medicare's physician payment system, intermediate measures were taken to stem rising program and beneficiary costs. However, there was strong agreement on the need for more substantial change. Although there was far less consensus on how it should be accomplished, agreement was finally reached, culminating in the enactment of Medicare physician payment reform in 1989.

Since passage of the reform package, implementation of all its various pieces has begun. While January 1, 1992, marked the beginning of transition to the Medicare Fee Schedule, implementation of the other key elements of payment reform were already under way. In OBRA89, the Congress set the first Volume Performance Standard for fiscal year 1990. It

Figure 1-4. Real Medicare Charges per Beneficiary for Physicians' Services, 1981-1991



Source: Board of Trustees 1991; Bureau of Labor Statistics

Note: Physician charges for 1990 and 1991 are projected.
Real charges are in 1991 dollars adjusted by the consumer price index.

also established and funded the Agency for Health Care Policy and Research (AHCPR) to conduct and support research on the appropriateness of medical services and to apply the results to improving clinical practice. In 1991, charge limits became effective.

Toward a Resource-Based Payment Method

In the Consolidated Omnibus Budget Reconciliation Act of 1985, the Congress began taking steps to realign the pattern of relative payments to physicians to reflect the costs associated with providing a service. The legislation directed the Health Care Financing Administration (HCFA) to conduct a relative value study and created the Commission to advise the Congress on issues of relative payment. About this time, HCFA issued proposed rules using the concept of inherent reasonableness to reduce prevailing charge screens for cataract surgery and anesthesia during cataract surgery.[3] Before the regulatory process was completed, the Congress reduced payment screens for these services in legislation (OBRA86).

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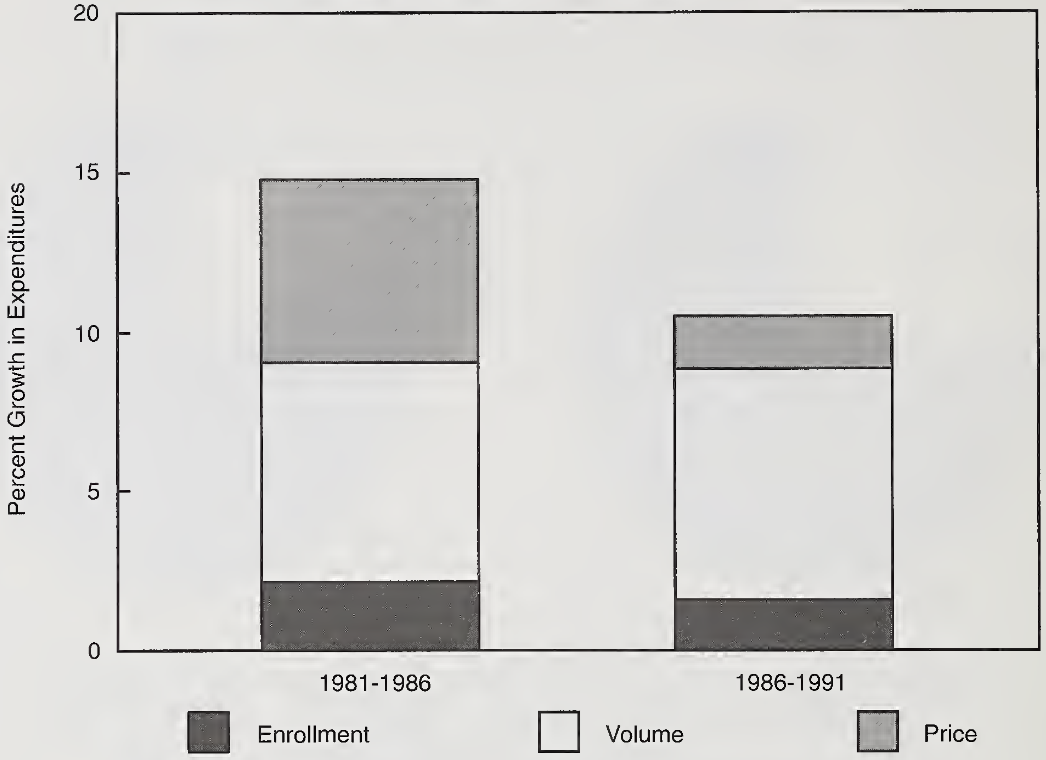
[3] Adjustment of the allowed charge for a service based on inherent reasonableness involved comparison of the allowed charge among payers or locations (adjusted for cost of practice), or comparison of the allowed charge over time, adjusting for inflation and changes in resource costs and technology. These comparisons identified allowed charges that were out of line relative to other charges and provided an estimate of how much to reduce the charge.

Figure 1-5. Average Annual Growth in Medicare Physician Expenditures by Component, 1981-1991



Source: Board of Trustees 1991

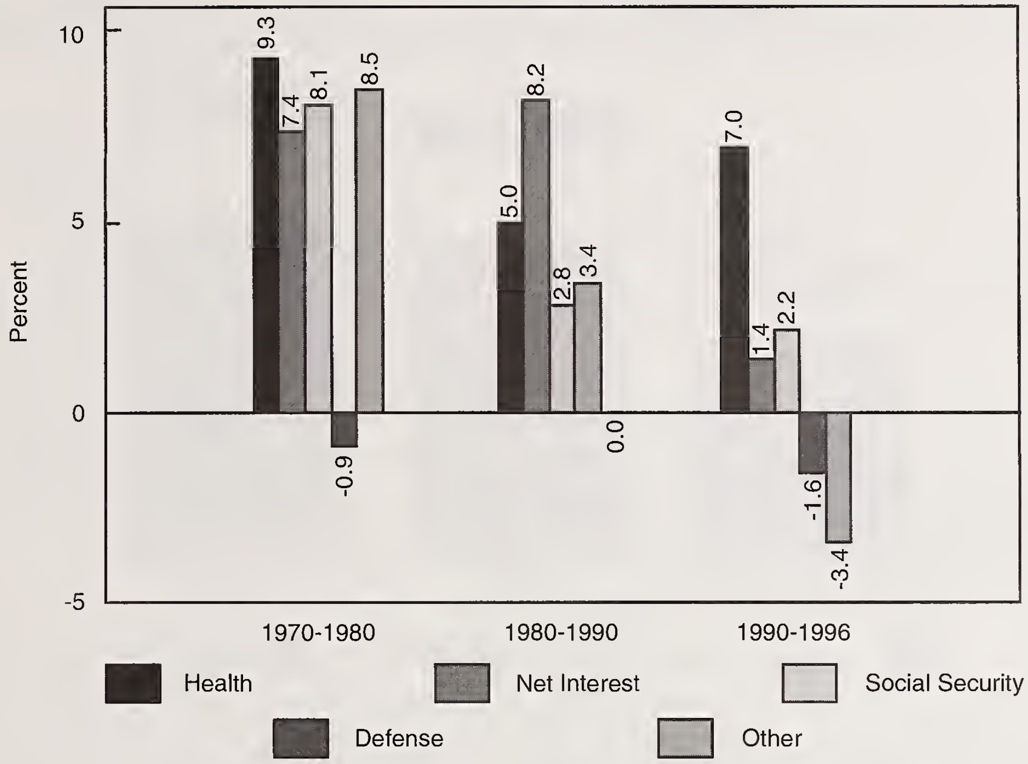
Note: Data cover aged beneficiaries only.
Data for 1990 and 1991 are projected.

The Commission endorsed the principle of inherent reasonableness as a tool for moving physician fees toward a resource-based payment system in its first report to Congress (PPRC 1987). In response to a request from the Congress to identify potential budget savings, the Commission followed the principle of inherent reasonableness to identify 12 families of procedures it considered overvalued in relation to Medicare payments for other services. In OBRA87, the Congress reduced prevailing charge screens for these services and imposed special charge limits. Further reductions in overvalued procedures followed in OBRA89 and OBRA90. For these last two rounds of reductions, the Commission recommended adjustments based on the payment methodology established for the Medicare Fee Schedule, including preliminary results from the work being conducted by Professor William Hsiao and his colleagues at Harvard University to develop a resource-based relative value scale.

The Medicare Fee Schedule

In 1989, the Congress adopted a resource-based fee schedule as a cornerstone of payment reform. It is being phased in to replace the CPR system over the period 1992 to 1996. Setting

Figure 1-6. Average Annual Rates of Growth in Real Federal Outlays, Selected Components, 1970-1996



Source: U.S. Congress 1991b, using data from the Congressional Budget Office

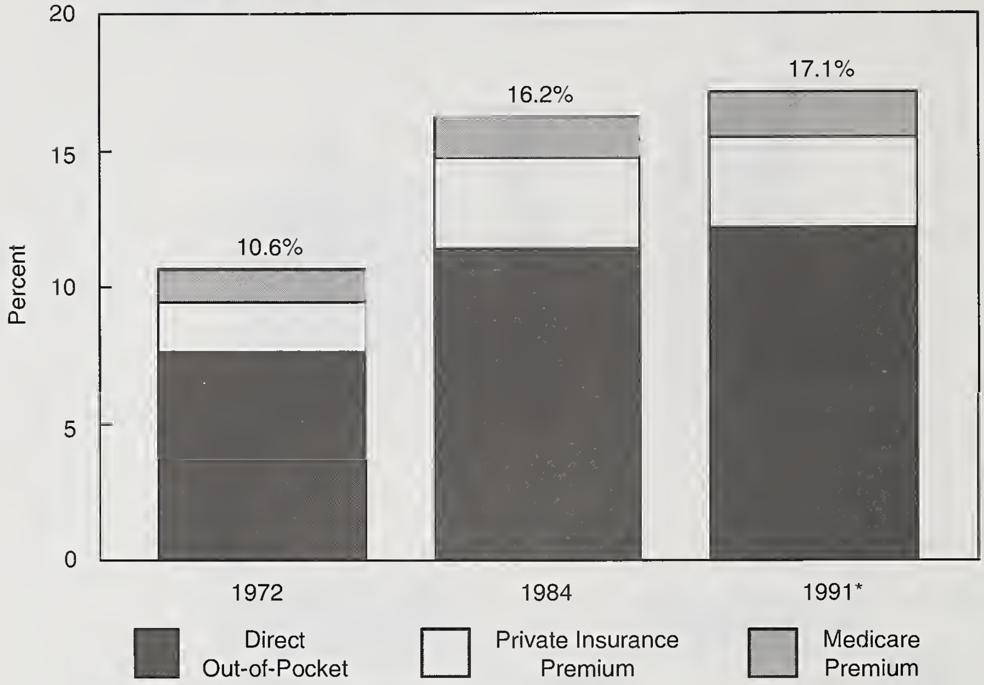
Note: Real outlays are in 1989 dollars, using the GNP fixed-weighted deflator. Health care outlays exclude those in the Department of Defense.

payment under the fee schedule begins with the relative value scale (RVS). The RVS has three cost components:

- a physician work component that reflects the time and intensity of the physician's effort in providing a service;
- a practice expense component that includes costs such as office rent, salaries, equipment, and supplies; and
- a separate malpractice component that reflects professional liability premium expenses.

While the proportion of a relative value represented by each component varies by service, on average, physician work accounts for slightly more than half the relative value. A geographic adjustment factor is applied to each of the components of the RVS to allow fees to vary from one locality to another, reflecting differences in costs. The RVS is translated into a schedule of fees when the sum of the three components is multiplied by a dollar conversion factor.

Figure 1-7. Elderly Family Out-of-Pocket Health Expenditures as a Percentage of After-Tax Income, Selected Years



Source: Families USA Foundation 1992

Note: Expenditures are for households headed by someone age 65 or older.

Direct costs include deductible and coinsurance amounts for private insurance and Medicare Part A and Part B; balance bills; and costs of uncovered services such as nursing homes, prescription drugs, dental and eye-care services, laboratory tests, and medical supplies.

* 1991 figures were estimated by Lewin/ICF.

Much effort was expended over the past two years in readying the fee schedule for implementation on January 1, 1992. The Health Care Financing Administration published a model fee schedule in September 1990 (Federal Register 1990). On June 5, 1991, the Notice of Proposed Rulemaking (NPRM) for the Medicare Fee Schedule was published, detailing the manner in which the fee schedule was to be implemented (Federal Register 1991a). Besides proposing relative value units, a conversion factor, and geographic adjustment factors, the NPRM delineated a number of specific rules pertaining to payment for selected services, sites of service, and providers.

In preparing the Final Rule, published on November 25, 1991 (Federal Register 1991b), HCFA attempted to address concerns raised in the Commission's comments on the NPRM (PPRC 1991b) and in the thousands of other comments it received. The area of the NPRM of greatest concern to physicians related to the conversion factor. Many physician groups asserted that the substantial downward adjustments proposed for the conversion factor would result in inequitable payments to physicians, including those (for example, internists)

Table 1-2. Cost Sharing Under Medicare, 1992

	Beneficiary Liability
Medicare Part A	
Hospital deductible	$652 per spell of illness
Hospital coinsurance	
Days 61-90	$163 per day
Days 90 on (for 60 lifetime reserve days)	$326 per day
Skilled nursing facility coinsurance	
Days 21-100	$81.50 per day
Medicare Part B	
Premium	$31.80 per month
Deductible	$100 per year
Coinsurance	20% of allowed charge[a]
Balance Bills	All excess up to the lower of 120% of the recognized payment amount for nonparticipating physicians or the physician's limiting charge for 1991.[b]

Note: [a] Outpatient psychiatric services are subject to a 50% copayment.

[b] Some states have more stringent requirements.

expected to receive higher payments under the fee schedule. Opposition was particularly widespread regarding HCFA's use of a behavioral adjustment in setting the conversion factor to offset the volume increases it projected would result from reductions in payments under the fee schedule.

A number of other specific policies enumerated in the NPRM drew critical comments from interested parties. The need to refine work values for surgical services and evaluation and management services was an issue raised by many, including the Commission. HCFA was also urged to adopt a more rational set of geographic payment localities and to continue use of actual time in the payment for anesthesia services.

Some of the changes that various groups proposed would require congressional action to be implemented. These include reinstating separate payment for electrocardiograms, basing payment for assistants-at-surgery on estimates of resource costs instead of an arbitrary percentage of the surgeon's fee, and eliminating the policy of lower payments for new physicians. Additionally, use of a resource-based method to calculate the practice and malpractice expense components of the fee schedule, which the Commission and others supported in their comments on the NPRM, would require a change in the legislation.

HCFA made a number of revisions between publication of the NPRM and the Final Rule. It also made it clear that the process of refining the Medicare Fee Schedule will continue. Given the complexity of the policy, it will be important to monitor the changes that take place and their effect on beneficiaries and physicians (see Chapters 2 and 3).

Toward an Effective Cost Containment Policy

With outlays for physicians' services exceeding all initial projections soon after Medicare's inception, it was not long before the program began to exert some efforts at slowing expenditure growth. In 1972, the Nixon Administration controlled increases in wages and prices, continuing limits on physician and hospital fees until 1974. Beginning in 1975, increases in Medicare prevailing charges became subject to constraints of the Medicare Economic Index (MEI). The MEI attempts to account for yearly changes in physicians' practice costs and general earnings levels. Efforts to control Medicare spending on physician services intensified in July 1984, when Congress imposed a fee freeze. For physicians in the Participating Physician and Supplier Program (PAR),[4] it was lifted May 1, 1986. For non-PAR physicians, it continued through December 1986. Beginning in 1987, the Congress began to specify the annual MEI increase, employing it as a tool for slowing expenditure growth.

Volume Performance Standards

Most concur that the attempts to arrest the growth in Medicare physician fees were not adequate given the rapid increase in volume of services. To restrain volume growth, the Commission recommended a plan to link fee updates to increases or decreases in expenditure growth. The system of Medicare Volume Performance Standards established in OBRA89 reflects this idea.

The VPS is set each year as a target rate of growth for Medicare physicians' services outlays. Fee updates are to be based on the difference between the VPS and the actual change in expenditures. Implementation of the VPS began with enactment of OBRA89, which established a performance standard rate of increase for fiscal year (FY) 1990 and a process for setting the standard in future years. Under this process, both the Secretary of Health and Human Services and the Commission recommend a VPS rate of increase and a fee update to the Congress each spring.[5]

Recommendations for the VPS must take into account several factors including growth and aging of the beneficiary population, inflation, appropriateness of care, access to care, and changes in technology. Separate rates of increase for surgical and nonsurgical services must be specified. Once the Congress receives these recommendations, it may either set the VPS or allow the VPS to be set by a default formula that combines beneficiary growth, inflation, and a five-year average of past volume growth less a predetermined amount (1.5 percent for 1992 and 2.0 percent thereafter).

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[4] As discussed below, PAR physicians agree to accept assignment on all claims.

[5] The Commission's next report will be submitted to the Congress on May 15, 1992.

The Secretary and the Commission took separate approaches in making their VPS recommendations for FY 1991 and FY 1992, resulting in different proposed rates of increase (Table 1-3). Although both relied on the same estimates to account for expenditure growth due to increases in fees, growth and aging of the beneficiary population, and the effects of prior legislation, they differed in the allowance they made for increases in volume and intensity of services. For both years, the Secretary allowed an increase in volume and intensity per beneficiary that equaled half the recent trend. The Commission, however, arrived at its allowance for volume increase by starting with the Medicare Actuary's baseline projection and subtracting 2 percentage points for FY 1991 and 2.5 percentage points for FY 1992. This approach reflects the Commission's view that outlays for physicians' services should be brought down to a sustainable level, growing no faster than nominal GDP by 1996 (PPRC 1990, 1991a).

Table 1-3. Volume Performance Standard Recommendations, Fiscal Years 1991 and 1992

	All Services	Surgical Services	Non-Surgical Services
1991			
Secretary of Health and Human Services	9.9	8.7	10.5
Physician Payment Review Commission	11.2	9.3	12.1
Congressional Action	7.3	3.3	8.6
1992			
Secretary of Health and Human Services	6.2	4.1	7.1
Physician Payment Review Commission	8.6	6.6	9.6
Congressional Action	10.0	6.5	11.2

Note: Changes in the baseline between the time the recommendations were made and the time the Congress acted explain some of the discrepancies among the numbers.

In setting the VPS for FY 1991, the Congress adopted the Commission's approach by directing HCFA to set the performance standard at the baseline minus 2 percentage points.

Because of the revision in the baseline to reflect substantial price cuts under OBRA90, the final performance standard, 7.3 percent, was much lower than that envisioned when the Commission made its recommendation. For FY 1992, the Congress allowed the default formula to take effect, resulting in a 10.0 percent VPS for all physicians' services. The default value would have been very close to the Commission's recommendation but for re-estimates of the baseline by the Medicare Actuary.

The Congress also allowed the default formula to determine the fee update for calendar year 1992, as recommended by both the Secretary and the Commission. The default formula reduces the MEI by the amount that expenditure growth in a given year exceeded that year's VPS. The result for 1992 was a 1.9 percent fee update.[6] (Because only one VPS was set for 1990, separate fee updates for surgical and nonsurgical services were not recommended.) In allowing the default formula to determine the update, the Congress set the precedent for linkage between volume growth and fee increases.

As the VPS system enters its third year, progress is being made in other areas to assist physicians in meeting the standard. Practice guidelines, research on appropriateness, effectiveness, and outcomes, and profiling of individual physicians are tools that have the potential to move medicine toward a more orderly and systematic approach to determining the appropriate volume of care. There is much activity in AHCPR and the private sector to develop and disseminate practice guidelines (see Chapter 8). In addition, carriers have already begun to employ profiling techniques to inform physicians whose practice patterns deviate significantly from the mean (see Chapter 9). In this report, the Commission emphasizes the importance of these tools in ensuring appropriate and cost-effective care for individual patients; yet it notes that much time and effort will be required to refine them and promote their appropriate use.

Toward Improved Beneficiary Financial Protection

Beginning in the mid-1980s, the Congress began to enact measures to ease the financial liability of Medicare beneficiaries. Although the 1984-1986 physician fee freeze provided Medicare beneficiaries with some relief from rising costs, the PAR program brought more substantial protection. Physicians signing participation agreements must take all claims in a given year on assignment; that is, they agree to accept the Medicare charge as payment in full on all claims, forgoing the opportunity to bill patients any additional amount. In return, they are listed in a directory available to beneficiaries and receive expedited claims processing.

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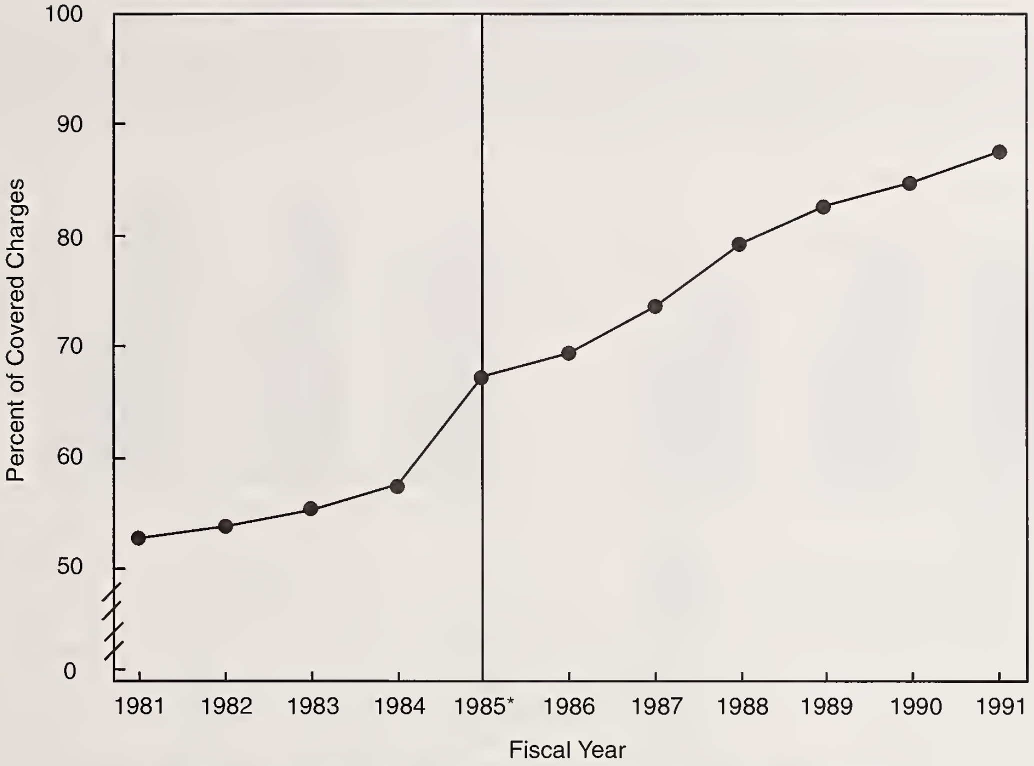
[6] Using the default formula, the Secretary and the Commission calculated a 2.2 percent increase in fees. The difference between their recommendation and the 1.9 percent update that was enacted reflects a difference between the projected data used by the Secretary and the Commission and the final data that were available when HCFA determined the update on the basis of the default formula.

Figure 1-8. National Assignment Rates, 1981-1991



Source: Health Care Financing Administration, Bureau of Program Operations

Note: Rates include physicians and suppliers.
* The Participating Physician and Supplier Program (PAR) began on October 1, 1984.

Moreover, since 1987, their prevailing charge screens have been 5 percent higher than those of non-PAR physicians. This payment differential continues under the Medicare Fee Schedule.

Assignment rates for both PAR and non-PAR physicians climbed dramatically over the past decade, from approximately 50 percent of charges in 1980 to 86 percent in 1991 (Figure 1-8).[7] Much of the increase appears attributable to the PAR program, created in 1984. More than half of all physicians have signed participation agreements (Table 1-4). Services provided by participating physicians accounted for 67 percent of total Medicare spending on physicians' services in 1990 (U.S. Congress 1991a).

Beginning in 1986, the amount that non-PAR physicians could bill in excess of the Medicare approved charge was constrained by maximum allowable actual charge (MAAC) limits. Under MAAC limits, physicians whose charges exceeded 115 percent of the prevailing charges for non-PAR physicians could only increase their actual charges by 1 percent each

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[7] Non-PAR physicians can opt to take assignment on a claim-by-claim basis.

Table 1-4. Physician Participation Rates for Selected Specialties, 1987-1991

Specialty	January 1, 1987	April 1, 1988	January 1, 1989	April 1, 1990	January 1, 1991
All Practitioners	**30.6**	**37.3**	**40.7**	**44.1**	**47.6**
Cardiovascular Disease	43.2	52.8	55.5	60.6	65.4
Radiology	39.8	46.3	49.6	55.6	62.0
General Surgery	37.2	48.5	52.2	55.8	60.5
Ophthalmology	35.1	46.3	50.5	55.6	60.0
Podiatry	33.4	44.6	52.6	54.0	59.6
Pathology	41.2	48.1	50.6	53.4	59.2
Orthopedic Surgery	32.6	44.0	49.2	53.7	58.4
Dermatology	38.1	45.7	48.7	53.4	57.0
Optometry	44.1	50.5	48.9	54.0	56.9
Neurology	37.2	44.1	49.2	53.1	56.1
Urology	30.9	41.7	45.6	49.6	53.6
Internal Medicine	33.6	41.2	45.2	48.8	52.6
Obstetrics/Gynecology	31.5	40.4	44.2	48.8	52.6
Family Practice	27.1	35.6	39.7	47.2	50.8
Otorhinolaryngology	27.0	36.9	41.2	45.2	49.6
Psychiatry	28.6	34.4	37.8	41.6	44.1
General Practice	25.6	32.3	35.8	39.7	44.0
Anesthesiology	20.3	25.0	28.3	30.8	36.5

Source: Health Care Financing Administration.

Note: Specialties are ordered according to 1991 participation rates.

The participation rate for all practitioners was 52.2 percent as of January 1, 1992.

year. Physicians whose actual charges were less than 115 percent of prevailing charges were allowed to increase their actual charges to that level over a four-year period (1987-1990).

Charge Limits

MAACs were intended to serve only as an interim solution for controlling balance bills. To replace MAACs, the Commission recommended limiting charges for unassigned claims to a fixed percentage of the Medicare Fee Schedule amount, a proposal the Congress adopted.

In 1992, charges for all services are limited to the lower of the 1991 limiting charge or 120 percent of the fee for non-PAR physicians. In 1993 and thereafter, charges are limited to 115 percent of the fee, and MAACs are eliminated.[8] The Commission has projected that beneficiary liability for balance bills will be reduced by 74 percent as a result of this policy (see Chapter 3).

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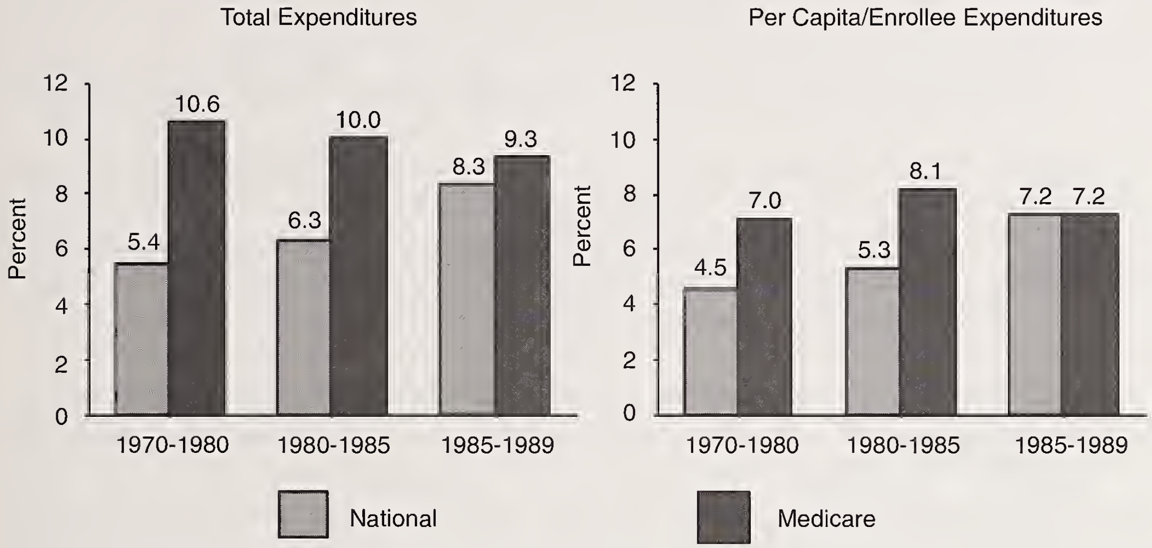
[8] Some states have set lower limits or prohibited balance billing altogether.

Figure 1-9. Average Annual Growth Rates of Real National and Medicare Expenditures for Physicians' Services, 1970-1989



Source: U.S. Congress 1991b, using data from the Congressional Budget Office

Note: Real expenditures are in 1989 dollars, using the GNP fixed-weighted deflator.

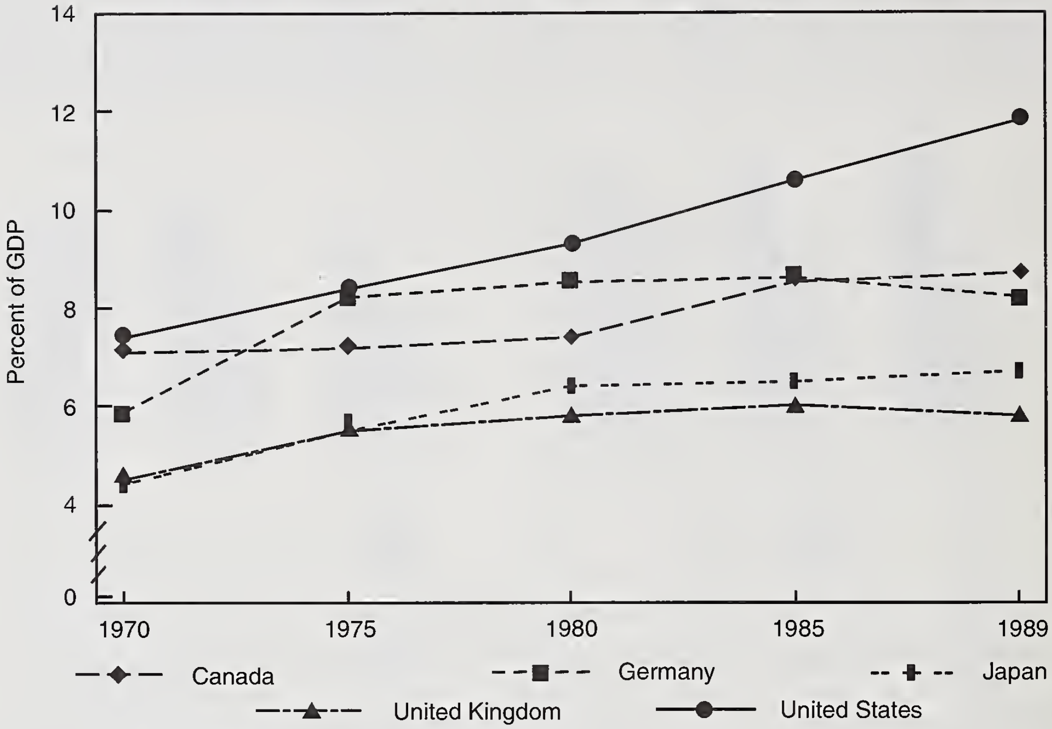
OBRA89 provided additional relief to beneficiaries by requiring that physicians submit all Medicare claims effective September 1990. This provision is expected to ensure appropriate payment for covered services and facilitate more accurate and timely payment of claims.

LOOKING AHEAD TO FUTURE REFORMS

Through reform of both its hospital and physician payment systems, Medicare has taken important steps toward constraining growth in program expenditures. Cost control efforts, which began in earnest in the mid-1980s, have led to a marked decline in the annual growth rate for Medicare hospital expenditures (Figure 1-2) and a smaller decline in the rate of growth in Medicare physician expenditures (Figure 1-9). These accomplishments contrast with continued growth in national health care expenditures, including spending for physician services (Figure 1-9).

Concerns have heightened over not only the rate of growth in national health expenditures but also the share of the nation's GDP that health care expenditures consume. Compared with other developed nations, the United States devotes a much larger portion of its national resources to health care; and this gap continues to widen (Figure 1-10). With few exceptions, over the past 30 years, growth in spending for health care in the United States has exceeded

Figure 1-10. Health Expenditures as a Percentage of Gross Domestic Product, for U.S. and Selected Countries, 1970-1989



Source: Schieber and Poullier 1991

Note: Gross domestic product is equal to gross national product less net property income from abroad.

growth in the overall economy; yet the trend has become more pronounced in recent years (Figure 1-2). A combination of a sluggish economy and little alteration in the historical pattern of health care spending drove health expenditures as a percent of gross national product (GNP) to 13.1 in 1991.[9] Absent any significant efforts to curtail growth in expenditures, this figure is projected to jump to as much as 23 percent of GNP by the year 2010 (Waldo et al. 1991).

Several factors are responsible for the escalation in health care costs. The rising price for medical services is one. In addition, growth in service volume — due to the incentives of payment methods, new technologies, uncertainty about the effectiveness of various treatments, patient demands, and the increasing supply of physicians — adds to the nation's health care bill.

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[9] Gross national product is equal to gross domestic product plus net property income from abroad. While GDP has become the standard measure of economic activity, much statistical work published previously uses GNP as the denominator.

Public dismay over rising costs and limited resources to meet other pressing societal needs has brought health care to the forefront of the national agenda. Increasing constraints on access to care also concern many. Nearly 35 million people were uninsured in 1990 (U.S. Congress 1992).[10] The prolonged recession since 1990 has increased the ranks of the uninsured and has placed a growing burden on state Medicaid programs. These programs are adding many to their rolls at a time when states are experiencing revenue shortfalls.

Employers, too, are becoming increasingly dissatisfied with the current health system. Many are faced with spiraling premium costs in part brought on by providers' raising fees to compensate for lower Medicaid and Medicare payment rates and charity care. As a result, employers have called for health care reforms while also adopting cost-saving strategies of their own, such as enrolling more of their employees in managed-care plans.

Reflecting what is widely viewed as a health care system in urgent need of change, more than 40 bills have been introduced in the 102d Congress that entail a broad range of proposals to address the problem of the uninsured as well as rising costs. In addition, the Administration recently put forward its proposal. While it will not be easy to achieve consensus on any one plan or establish a means to finance it, there is strong interest in enacting some measure of reform.

As national debate over comprehensive health care reform intensifies, the work of the Commission will contribute to shaping its outcome. As described in the introduction to this report, the Commission's mandate was significantly expanded in OBRA90, incorporating issues relevant not only to Medicare but also to Medicaid and private payers, physician supply and distribution, medical malpractice, practice guidelines, and profiling. The Commission's analyses and recommendations in this report to Congress outline some of the major policy and operational challenges that lie ahead — both for Medicare as it continues to refine its new physician payment system and the nation as it looks ahead to a sustainable health system that assures quality and access.

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[10] This figure reflects the number of people uninsured at a given point in time. The number of people uninsured over the span of a year—whether for the whole year or part of the year—is much higher. For example, 48 million people lacked insurance for some or all of 1987 (Short 1992).

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CHAPTER 2

ASSURING EQUITABLE PAYMENT UNDER THE MEDICARE FEE SCHEDULE

On January 1, 1992, implementation of the Medicare Fee Schedule began, almost exactly two years after the Congress enacted legislation — the Omnibus Budget Reconciliation Act of 1989 (OBRA89) — to reform the way Medicare pays physicians. In a sense, this date marked both a beginning and an ending. It was the beginning of a transition toward a time when Medicare will pay physicians based on a fee schedule rather than on reasonable charges. But it was also the ending of the initial period of design for this fee schedule.

The design phase began in earnest on December 19, 1989, when OBRA89 became law. The Health Care Financing Administration (HCFA) made public the first formal statement of what the fee schedule might look like with the release of the Model Fee Schedule in September 1990 (*Federal Register* 1990). This document revealed a number of tentative policy and technical decisions and raised other implementation issues and options. The Commission commented on some of these plans and options in its *Annual Report to Congress 1991* (PPRC 1991a). It gave particular attention to HCFA's plans for refining the scale of relative work, calculating the budget-neutral conversion factor, and monitoring beneficiary financial protection and access to care, as well as to potential modifications in the methods of calculating the practice expense and malpractice expense components of the relative value scale (RVS).

On June 5, 1991, HCFA outlined in its Notice of Proposed Rulemaking (NPRM) more detailed plans for implementation of the fee schedule, including its approach to numerous critical policy issues (*Federal Register* 1991a). Specifically, this document included HCFA's proposals for a conversion factor and relative values (RVs) for 3,600 codes. With the proposed conversion factor setting fee levels about 16.5 percent below the baseline level by the time of complete implementation in 1996, a firestorm of protest arose from physician groups and others. The Commission held a hearing in June to elicit reactions from affected parties.

The Commission reviewed the NPRM and prepared comments that were presented to the Congress and were also submitted to HCFA (PPRC 1991b). These comments focused primarily, although not exclusively, on the two areas of greatest concern to many in the Congress and to many of the parties, including the Commission, that came together in support of physician payment reform: the conversion factor and the scale of relative work.

HCFA received in total about 95,000 items of correspondence during the comment period. During this same period, a considerable amount of lobbying and legislative activity took place, mostly related to the conversion factor issue. In particular, many were concerned about HCFA's proposed behavioral adjustment to offset volume increases that it projected would result from the implementation of the fee schedule. A majority of House members signed on as cosponsors last year to legislation that would bar the use of any behavioral adjustment in calculating the conversion factor.

Publication of the Final Rule by HCFA on November 25, 1991, marked the final, official event of the initial design phase for the Medicare Fee Schedule (*Federal Register* 1991b). HCFA completed a mammoth task in publishing the fee schedule and initiating its timely implementation. The elements for calculating fees are in place. The conversion factor is set at $31.00 (reflecting a 1992 update factor of 1.9 percent). Relative work values (RWVs) have been established for some 5,500 active codes, along with relative values for practice expenses and malpractice expenses, and geographic adjustment factors (GAFs) for about 230 payment localities. Services have been classified with regard to a global surgery policy, and payment policies for each category of surgical services have been specified.

Nevertheless, the design phase is not really over. Although much of the developmental work is now complete, the resulting fee schedule still requires significant refinement. Of the shortcomings in the preliminary version of the Medicare Fee Schedule on which the Commission commented earlier, many were addressed in the Final Rule. But others remain, some very serious.

The design of the fee schedule has implications well beyond the Medicare program. Already some state Medicaid programs and some private payers are moving ahead to adopt elements of the fee schedule; many others are exploring such options. By all indications this trend is certain to continue. In addition, some proposals for health system reform would apply the concepts embodied in the Medicare Fee Schedule to more private payers, either by offering incentives or by mandating that all payers adopt this approach.

The prospect of broader use of the Medicare Fee Schedule raises issues of applicability, such as whether the relative value scale now embedded in the fee schedule applies to the services and patients covered by other payers. It also increases the importance of assuring the accuracy and equity of relative values as they account for a greater proportion of physicians' incomes and highlights the urgency of refining the fee schedule in ways that would assure equitable payment to all physicians.

This chapter makes three overarching recommendations that reflect the Commission's conclusion that the refinement process must continue. The text of the chapter, however, includes numerous other recommendations and suggestions about specific provisions of the fee schedule. Some of these are reiterations of recommendations made in earlier reports; others relate to new issues that have arisen with publication of the Final Rule.

RECOMMENDATION

Further refinements necessary to assure equitable payment to physicians should be made in the Medicare Fee Schedule. In general, the refinement process should address the underlying problems in the Medicare Fee Schedule's relative value scale rather than making exceptions in the Medicare Fee Schedule for specific types of physicians (or modifying the transitional rules).

Issues such as compensating physicians for the costs of medical education, research, or uncompensated care should be addressed separately from the refinement of the Medicare Fee Schedule.

Fee schedule refinements should be made in an open process involving a broad spectrum of payers (both public and private), practitioners, and consumers.

This chapter begins with an overview of the projected impact of the Medicare Fee Schedule on physicians, including those in different specialties and in different parts of the country. It then proceeds with a discussion of the overall need for refinement and the Commission's suggestions for how to accomplish these refinements.

Much of the chapter is devoted to a review of many of the elements of the Medicare Fee Schedule, starting with the payment policies adopted for invasive services, the codes that underlie payment, and the assignment of relative work values to the codes, with a particular emphasis on the new system of coding and paying for evaluation and management (EM) services. The chapter also reviews potential adjustments in payment for patient factors (including severity of illness), the setting of relative values for practice and malpractice expenses, geographic adjustment, the conversion factor, and a variety of other issues.

Throughout the discussion in these sections of the chapter, attention is given to identifying those areas where congressional intent has been substantially met, as well as indicating those elements where further refinements may be necessary to assure equitable payment. In some cases, HCFA has the authority to make the needed adjustments by regulatory action, and in some of these, it has expressed a willingness or an intention to explore changes. In other areas, congressional action may be necessary to amend provisions of the law that preclude the ability of the Medicare Fee Schedule to pay physicians in an equitable manner.

In the final sections of the chapter, the Commission looks at the ability of the Medicare Fee Schedule to serve as a model for payment by other payers and at the process for future refinement. The chapter examines the implications of a broader application of the fee schedule, outlining some of the refinements that may be necessary as other payers adopt it.

The chapter also offers guidance on the type of process that might be used in making refinements.

MEASURING THE IMPACT OF THE MEDICARE FEE SCHEDULE

The Medicare Fee Schedule shifted the basis of physician payments from charges to relative values reflecting resource costs. As shown by the simulations presented below, the fee schedule has significant redistributive effects on payments for individual services, for families of services, and for payments received by physicians in different specialties. This section describes and analyzes those effects. The impact of payment reform on beneficiaries is presented in Chapter 3.

With one exception, these simulations compare payments under the Medicare Fee Schedule as if it had been fully implemented in 1991 with estimated payments in 1991 under the customary, prevailing, and reasonable charge (CPR) method.[1] The 1991 data have been adjusted in several ways to remove relative value changes that were implemented during the period 1989 to 1991. Since these changes were early transitional steps toward the fee schedule, they are incorporated in the baseline. In particular, adjustments were based on various legislative provisions that changed payment patterns in line with preliminary estimates of the fee schedule's effects. These provisions include both reductions in payments for radiology, anesthesiology, pathology, and designated overvalued procedures, and differential updates for primary care versus other services.

The exception is in the simulations of the change from 1991 to 1992, which show the impact on payments for that year only. These simulations use estimated 1991 allowed charges as the baseline. Payments for 1992 reflect the fee update of 1.9 percent. This analysis compares payments that physicians are receiving from Medicare in 1992 with the actual rates they received in 1991.

The Commission's simulations will differ from those generated by HCFA and the American Medical Association (AMA) for several reasons (*Federal Register* 1991b: 59612-21; Reynolds 1991). First, the HCFA and AMA simulations have not adjusted the 1991 baseline for the earlier relative value changes. As a result, the simulations in this chapter will tend to indicate larger changes in relative payments.

In addition, these simulations assume no change in the behavior of physicians and beneficiaries in response to the fee schedule. No calculation is made for possible shifts in physician assignment rates or participation decisions, or for possible changes in the volume or mix of services. By contrast, HCFA assumes that volume and intensity will increase, but that assignment and participation rates will remain the same.[2]

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[1] In general, fee schedule payments in these simulations do not include the fee updates that will occur each year. The analysis comparing 1992 payments with allowed charges in 1991, however, includes the update.

In these simulations, internal medicine is divided into two categories, procedurally oriented and nonprocedurally oriented internists. What is reported in data files as services provided by internists includes those by general internists and those by some medical subspecialists. Some subspecialties of internal medicine are not recognized by HCFA, so physicians in those are listed as internists. For a few subspecialties that are recognized by HCFA (such as cardiology), some carriers nevertheless classify those physicians as internists. As a result, the category of internists is quite heterogeneous. In order to obtain a better sense of the implications of payment reform for general internists and for internists who perform specialized procedures, these simulations divide internists into two groups based on the services they provide.[3]

Impact of the Fee Schedule Transition

OBRA89 authorized a five-year transition to the fee schedule. Services with average local historical charges between 85 percent and 115 percent of the fee schedule payment amounts are paid at the fee schedule in 1992.[4] Payments for other services will be a blend of historical charges and fee schedule amounts from 1992 through 1995, reaching the fee schedule level in 1996. The average historical charges in the transition period do not continue previous specialty differentials.

In 1992, the first year of the transition to the fee schedule, physicians will experience noticeable changes in their payments for services from Medicare. From 1991 to 1992, total payments to physicians will decline by 1.2 percent (Table 2-1). This includes a 3 percent reduction associated with the baseline adjustment (described below) and the 1.9 percent update. In the first year, payments to all family and general practitioners increase by 17 percent, while payments to most other specialties change by much smaller amounts. A large component of this increase for family and general practice results from complete elimination of specialty differentials in 1992.

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[2] Changes shown in this chapter are comparable to changes in the column entitled "payments per service" in the Final Rule (*Federal Register* 1991b: 59612-21).

[3] Since providing some procedures requires that the physician have specialized training, it is likely that the performance of one or more of these services indicates the type of practice. Therefore, those internists who performed at least one heart catheterization, angioplasty, pacemaker insertion, upper gastrointestinal endoscopy, colonoscopy, electroencephalogram, scan of extracranial arteries, bronchoscopy, cardiovascular imaging, thyroid imaging, pulmonary perfusion imaging, dialysis, cystourethroscopy, nerve conduction study, or electromyography were categorized as procedurally oriented internists. Other internists were identified as nonprocedurally oriented internists.

[4] This transition applies to all services except radiology. OBRA90 provided that payments for those radiology services whose charges are between 85 percent and 109 percent (compared with 115 percent for other services) of the fee schedule be paid the fee schedule amount in 1991. Overvalued radiology services are being reduced at a slower rate than are other services.

Table 2-1. Change in Payments by Specialty: Comparison of 1992 with 1991 Payments

SPECIALTY	PERCENT CHANGE
MEDICAL	3
Cardiology	-6
Family/General Practice	17
Gastroenterology	-8
Internal Medicine	1
Nonprocedurally Oriented	2
Procedurally Oriented	-1
Other Medical	3
SURGICAL	-4
General Surgery	-3
Ophthalmology	-9
Orthopedic Surgery	-4
Thoracic Surgery	-9
Urology	-3
Other Surgical	2
RADIOLOGY/PATHOLOGY	-9
Radiology	-9
Pathology	-9
OTHER	2
ALL PHYSICIANS	-1

Source: PPRC simulations using 1988 BMAD I, aged to 1992. Payments in 1992 include the 1.9 percent update.

The impact on individual physicians differs from the change reported for their specialties, with some physicians experiencing significantly larger changes than shown above for their specialty (Table 2-2). For example, the largest decline for a specialty is 9 percent, whereas 26 percent of all individual physicians will experience decreases of more than 10 percent. While over half of the physicians will experience changes of 10 percent or less in payments in 1992, 11 percent will gain more than 20 percent and 2 percent will lose more than 20 percent. A large proportion of general and family practitioners will experience substantial increases in payments.

Table 2-2. Distribution of Physician Practices by Percent Change in Payments: Comparison of 1992 with 1991 Payments

	PERCENT CHANGE IN PAYMENTS								
	Loss				Gain				Percent
SPECIALTY	>30	21-30	11-20	0-10	0-10	11-20	21-30	>30	w/ Gains
MEDICAL	0	3	16	28	23	13	8	9	53
Cardiology	0	5	24	43	16	5	3	4	28
Family/General Practice	0	0	3	10	20	24	18	23	85
Gastroenterology	0	3	55	30	7	2	1	2	12
Internal Medicine	0	2	14	33	29	12	6	4	51
Nonprocedurally Oriented	0	2	11	32	30	15	6	5	56
Procedurally Oriented	0	1	21	36	26	8	5	4	43
Other Medical	1	4	15	27	25	12	6	10	53
SURGICAL	0	1	28	40	19	7	2	3	31
General Surgery	0	0	25	46	21	5	2	1	29
Ophthalmology	0	1	37	43	14	3	1	1	19
Orthopedic Surgery	0	0	23	43	23	7	3	0	33
Thoracic Surgery	0	9	50	28	7	2	2	1	12
Urology	0	0	15	48	25	7	2	2	36
Other Surgical	0	1	16	29	23	15	6	9	53
RADIOLOGY/PATHOLOGY	2	4	49	34	7	2	1	1	11
Radiology	1	0	52	37	7	2	1	0	10
Pathology	4	28	34	19	5	3	1	4	13
OTHER	0	1	18	49	19	6	3	5	33
ALL PHYSICIANS	0	2	24	35	19	9	5	6	39

Source: PPRC simulations using 1988 BMAD III, aged to 1992. Practices are weighted by payments in 1992. Payments in 1992 include the 1.9 percent update.

If OBRA89 and OBRA90 are seen as the beginning of the transition to the fee schedule, 62 percent of the total change in payment rates will be accomplished by 1992 (Table 2-3). After 1992, the remaining change will be spread evenly over the next four years. Evaluation and management and other services move toward the fee schedule at fairly similar rates.

Impact of Final Fee Schedule Payments for Illustrative Services

When fully implemented, the Medicare Fee Schedule will substantially increase payments for some services and reduce payments for others compared to adjusted 1991 allowed

Table 2-3. Fee Schedule Transition: Percent of Total Change Accomplished, by Year

	1991	1992	1993	1994	1995	1996
Specialty Group						
Medical	19	58	68	79	89	100
Surgical	26	66	74	83	91	100
Radiology/Pathology	35	68	76	84	92	100
Other	24	58	68	79	89	100
Types of Services						
Evaluation and Management	17	60	70	80	90	100
Other	28	63	72	82	91	100
All Services	24	62	72	81	91	100

Source: PPRC simulations using 1988 BMAD I, aged to 1991.

charges (Table 2-4). Payments for office visits with an established patient will increase 32 percent, while those for subsequent hospital care visits will increase 25 percent.[5] On the other hand, payments for most of the listed surgical and diagnostic procedures will decrease more than 25 percent.

Changes in payments for specific procedures occur because relative charges for many procedures under CPR are different from relative values under the Medicare Fee Schedule. This can be shown by calculating ratios of allowed charges to total relative value units (RVUs) assigned under the fee schedule for different services. For example, under CPR physicians were paid $55 per RVU for performing a coronary artery bypass graft (CABG), but received $23 per RVU for an intermediate office visit with an established patient. In contrast, under the fee schedule all services are paid at a rate of $31 per RVU in 1992.

Additional insight into the pattern of changes in payment by service can be gained by grouping the thousands of services into families (Table 2-5).[6] While there are substantial increases in payments for EM services, there are decreases in payments for all other families of services.

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[5] Since codes for EM services were significantly revised for 1992, it is difficult to predict how physicians will use these new codes. Although simulations reported in this chapter are based on HCFA's crosswalk, changes in payments will depend on the actual use of these codes.

[6] For those interested in the payments for services not listed above, the national average payment can be calculated by multiplying the relative value units for the service (which are listed in the Final Rule) times the conversion factor (*Federal Register* 1991b).

Table 2-4. Change in Medicare Payments for Selected Procedures: Fully Implemented Medicare Fee Schedule Compared with Adjusted 1991 Baseline

CPT CODE	DESCRIPTION	PERCENT CHANGE
EVALUATION AND MANAGEMENT		
92014	Eye Exam, Established Patient	32
99201 - 99205	Office Visit, New Patient	49
99211 - 99215	Office Visit, Established Patient	32
99221 - 99223	Initial Hospital Care	33
99231 - 99233	Subsequent Hospital Care	25
99241 - 99245	Office Consultation	20
99251 - 99255	Initial Inpatient Consultation	18
99261 - 99263	Follow-up Inpatient Consultation	31
99271 - 99275	Confirmatory Consultation	10
SURGERY		
27130	Total Hip Replacement	-30
27244	Repair Femur Fracture	-13
33207	Insertion of Pacemaker	-47
33512	Coronary Artery Bypass	-44
44140	Partial Removal of Colon	-26
49505	Repair Inguinal Hernia	-40
52601	Prostatectomy (TUR)	-30
66984	Remove Cataract, Insert Lens	-40
DIAGNOSTIC		
43235	Upper GI Endoscopy	-31
45378	Diagnostic Colonoscopy	-38
52000	Cystoscopy	-3
71010	Chest X-Ray (Global)	-4
71010	Chest X-Ray (Professional Component)	-27
70470	Contrast CAT Scan of Head (Global)	-15
70470	Contrast CAT Scan of Head (Professional Component)	-46
ALL SERVICES		-6.5

Source: PPRC simulations using 1988 BMAD I, aged to 1991.

Table 2-5. Change in Medicare Payments for Families of Services: Fully Implemented Medicare Fee Schedule Compared with Adjusted 1991 Baseline

FAMILY	PERCENT CHANGE
Evaluation and Management	31
Diagnostic Procedures	-25
Global Surgical Procedures	-30
Pathology	-20
Radiology	-27
Therapeutic Procedures	-8

Source: PPRC simulations using BMAD I, aged to 1991.

Impact by Specialties

Under the Medicare Fee Schedule, payments to groups of specialties and specialists who largely provide evaluation and management services will increase and those to others will decrease (Table 2-6).[7] Payments to medical specialties as a group will increase slightly and payments to surgical specialties and hospital-based specialties will decrease significantly. Within the category of medical specialties, those specialties that provide more procedures (e.g., cardiology and gastroenterology) will have decreased payments. Those that provide predominantly EM services (e.g., family practice and general practice) will have substantial increases.

This pattern holds even within internal medicine. When physicians identifying themselves as internists are divided into two groups based on the services that they provide, those who did not perform any specialized procedures will receive 16 percent more under the fee schedule than under CPR. Payments to procedurally oriented internists will remain about the same.

Within-Specialty Effects. Within the same specialty some physicians will receive increased payments; others will receive decreases (Table 2-7). This is true in varying degrees for all specialties. Whereas payments to family and general practice physicians will rise on

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[7] Estimates of the impact of the fee schedule on specialties are subject to uncertainty because there may be changes in the volume and intensity of services provided. Major revisions in codes and the actual use of new codes by physicians will also affect impact of the fee schedule on specialties. Estimates for changes in pathology, for example, are subject to more uncertainty than those for other specialties because of major coding changes (e.g., CPT codes 88300-88309).

Table 2-6. **Change in Medicare Payments by Specialty: Fully Implemented Medicare Fee Schedule Compared with Adjusted 1991 Baseline**

SPECIALTY	PERCENT
MEDICAL	9
Cardiology	-21
Family/General Practice	39
Gastroenterology	-19
Internal Medicine	9
Nonprocedurally oriented	16
Procedurally Oriented	0
Other Medical	16
SURGICAL	-15
General Surgery	-14
Ophthalmology	-25
Orthopedic Surgery	-14
Thoracic Surgery	-35
Urology	-7
Other Surgical	4
RAPs	-28
Radiology	-27
Anesthesiology	-31
Pathology	-23
OTHER	-1
ALL PHYSICIANS	-6.5

Source: PPRC simulations using 1988 BMAD I, aged to 1991. Anesthesiology's change is calculated as the change in the conversion factor. Total payments to anesthesiologists were further reduced due to other provisions of OBRA89 and OBRA90.

average, payments to about 6 percent of physicians in those specialties will fall. On the other hand, while on average general surgeons will lose revenue, about 23 percent of general surgeons will gain revenue. These variations are due to differences in the mix of services physicians provide, to their previous charges relative to those of their peers, and to comparisons between local charges and payments adjusted by the GAF.

The impact of service-mix differences on a specialty is also demonstrated in the contrast between the two categories of internists. Compared with nonprocedurally oriented internists, a larger number of procedurally oriented internists will have losses (Table 2-7). An example of the differential change within specialties associated with the geographic aspects of reform is that less than 1 percent of family and general practitioners in rural areas will have losses,

Table 2-7. **Distribution of Physician Practices by Percent Change in Payments: Comparison of Fully Implemented Medicare Fee Schedule with 1991 Adjusted Baseline, by Specialty**

	PERCENT CHANGE IN PAYMENTS								
	Loss				Gain				Percent w/ Gains
SPECIALTY	>50	26-50	11-25	0-10	0-10	11-25	26-50	>50	
MEDICAL	1	7	13	10	13	19	21	17	70
Cardiology	3	28	31	16	9	8	4	1	22
Family/General Practice	0	1	2	3	6	15	30	44	95
Gastroenterology	0	24	51	13	5	2	1	3	11
Internal Medicine	0	3	9	10	17	29	24	8	78
Nonprocedurally Oriented	0	1	5	8	16	30	29	10	85
Procedurally Oriented	0	7	17	13	19	25	14	4	62
Other Medical	0	2	9	12	20	19	22	16	77
SURGICAL	1	23	31	19	10	7	5	4	26
General Surgery	0	19	37	21	10	7	4	2	23
Ophthalmology	1	40	40	13	3	1	1	1	6
Orthopedic Surgery	0	10	39	32	14	5	1	0	20
Thoracic Surgery	9	61	22	5	1	1	1	0	3
Urology	0	7	26	30	21	12	1	3	37
Other Surgical	0	9	21	17	19	17	11	6	53
RADIOLOGY/PATHOLOGY	1	48	36	6	3	2	2	2	9
Radiology	0	47	38	6	3	1	2	2	8
Pathology	5	54	23	5	5	3	1	5	14
OTHER	1	10	24	16	16	10	12	11	49
ALL PHYSICIANS	1	16	23	13	12	12	13	10	47

Source: PPRC simulations using 1988 BMAD III, aged to 1991. Practices are weighted by payments under the Medicare Fee Schedule.

while nearly 9 percent in extremely large metropolitan areas (those with populations of more than 3 million) will have losses.

Implications for Geographic Areas

Payments under the fee schedule are adjusted by the GAF so that payments for the same service reflect only differences in physicians' costs of furnishing the service. The Medicare Fee Schedule will redistribute payments from urban areas to rural areas, especially those counties with the smallest populations (Table 2-8). Most of the redistribution across geographic areas is due to the previous level of charges relative to national average charges and the GAF. Part is also attributable to the mix of services provided in an area. Rural counties, especially the smallest ones, have a higher proportion of evaluation and management services than urban areas.

Table 2-8. Changes in Medicare Payments for Geographic Areas: Fully Implemented Medicare Fee Schedule Compared to Adjusted 1991 Baseline

AREA	PERCENT
Metropolitan >3 million	-9
Metropolitan between 1 and 3 million	-9
Metropolitan <1 million	-4
Rural County >25,000	1
Rural County <25,000	27
ALL LOCATIONS	-6.5

Source: PPRC simulations using 1988 BMAD III, aged to 1991.

Within each geographical category, some physicians will lose revenue and others will gain (Table 2-9). While the typical physician in the largest metropolitan areas will lose revenue under the fee schedule, about 43 percent will gain. By contrast, whereas the typical physician in the small rural areas (those with populations of less than 25,000) will gain revenue, about 17 percent will experience a decline in payments. This variation is due to differences in historical charges and the mix of services provided by physicians practicing within each type of area.

Understanding the Impact of Payment Reform

The total impact on a specialty is the sum of the impacts of three different aspects of payment reform — the elimination of specialty differentials, the relative value scale, and the GAF. Paying physicians in different specialties the same amount for the same service will increase payments for some specialties and decrease payments for others when there is significant overlap in the services provided by those specialties. Evaluation and management services are the most notable in this regard since they are provided by physicians in most specialties. Therefore, the elimination of specialty differentials has the most pronounced effect on medical specialties. It results in higher payments for general and family practice physicians, but lower payments for the other medical specialties (Table 2-10). For most other specialties, this aspect of payment reform has only a small impact.

Table 2-9. Distribution of Physician Practices by Percent Change in Payment: Comparison of Fully Implemented Medicare Fee Schedule with 1991 Adjusted Baseline, by Geographic Area

	PERCENT CHANGE IN PAYMENT								
	Loss				Gain				Percent
AREA	>50	26-50	11-25	0-10	0-10	11-25	26-50	>50	w/ Gains
Metropolitan >3 million	2	18	23	14	11	13	11	8	43
Metropolitan 1-3 million	1	18	25	15	11	12	10	7	40
Metropolitan >1 million	1	16	22	13	13	12	14	9	49
Rural County >25,000	0	12	21	11	8	15	16	16	55
Rural County <25,000	0	3	8	6	12	8	23	39	82

Source: PPRC simulations using 1988 BMAD III, aged to 1991. Practices are weighted by payments under the Medicare Fee Schedule.

The geographic adjustment policy will affect specialties that are not evenly distributed across all locations (Table 2-10). Thus, family and general practice physicians, who are more likely to be located in rural areas, will benefit from this aspect. Most other specialties will experience slight decreases due to this policy. Overall, the geographic adjustment is not a major factor in the redistribution of payments across specialties.

The third aspect of payment reform, the resource-based relative value scale, generates most of the change for nearly all specialties (Table 2-10). Even for family and general practice physicians, a larger proportion of the change in payments is attributable to changes in the RVS than to either the elimination of specialty differentials or the geographic adjuster.

ASSESSING THE NEED FOR REFINEMENTS IN THE FEE SCHEDULE

Reporting on the implementation phase a scant three months after the January 1, 1992, start date does not allow the Commission to assess definitively its success or failure. But it is possible to evaluate the design phase and to indicate whether the fee schedule — as formally stated in the *Federal Register* (1991b) — meets the intentions of its congressional framers.

The basic structure of the Medicare Fee Schedule is in place as designed. Once the transition period is concluded, the fee for each service will be based on the relative values

Table 2-10. Decomposition of Medicare Fee Schedule Changes, by Specialty

	COMPONENTS OF CHANGE				
SPECIALTY	**Baseline Adjustment**	**Elimination of Specialty Differential**	**Geographic Adjustment**	**Relative Value Scale**	**Total**
MEDICAL	-6.5	0	2	14	9
Cardiology	-6.5	-3	-1	-10	-21
Family/General Practice	-6.5	12	8	26	39
Gastroenterology	-6.5	-1	0	-11	-19
Internal Medicine	-6.5	-5	0	21	9
Nonprocedurally Oriented	-6.5	-5	-2	29	16
Procedurally Oriented	-6.5	-6	3	9	0
Other Medical	-6.5	-4	-1	27	16
SURGICAL	-6.5	1	-1	-8	-15
General Surgery	-6.5	2	0	-11	-14
Ophthalmology	-6.5	-1	-2	-16	-25
Orthopedic Surgery	-6.5	2	-5	-4	-14
Thoracic Surgery	-6.5	0	-3	-25	-35
Urology	-6.5	-1	0	0	-7
Other Surgery	-6.5	2	1	10	6
RADIOLOGY/PATHOLOGY	-6.5	-1	-2	-17	-27
Radiology	-6.5	-2	-2	-17	-27
Pathology	-6.5	0	-3	-13	-23
OTHER	-6.5	-3	11	-3	-1

Source: PPRC simulations using 1988 BMAD III, aged to 1991.

established for work, practice expense, and malpractice expense for that service, meeting the basic requirements of the law. Other goals established in OBRA89 will have been met as well: reform of the coding system for evaluation and management services, uniform definitions of which services are included in a global surgical payment, the elimination of specialty differentials, and limitations on balance billing.

The biggest point of contention over the past year has been the conversion factor, both its level and the assumptions involved in its calculation. In practice, the conversion factor tends to become the most political piece of the equation, since it is the point where the relative value scale is translated into the realities of dollars. Controversies over behavioral offsets, asymmetrical transitions, and even whether the data were “trimmed” properly led to considerable anxiety in the physician community, only some of which was alleviated with publication of the Final Rule.

The broad outlines of payment reform have also been established. In line with congressional intent, a substantial redistribution of the total payments to physicians has been accomplished (as described in the previous section of this chapter). It reflects a conclusion by the Congress that an imbalance existed among payments for different kinds of services and a decision that this imbalance should be redressed.

Reaction from the physician community has ranged from cautious satisfaction to anger and from demands for delay of implementation to requests for changes at the margins. While the simulations described in the previous section of the chapter show a substantial mix of gainers and losers, physician groups are reporting that physicians who believe they are benefiting from the changes are hard to find. Even those who see increased payment for visits argue that these gains are canceled out by losses due to reduced fees for procedures, charge limits, and other changes. The result appears to be growing levels of frustration and disappointment, especially among those who held high hopes for the beneficial effects of payment reform. These feelings represent a serious concern for the Commission. To the extent that the frustration translates into any decline in accessibility and quality of care for Medicare beneficiaries, this concern would become even greater (see Chapter 3).

The impact of all these changes in fees will take months — and even years — to assess. Most physicians and physician groups can point to at least some services that they think will be unjustly compensated. Often they are simply reacting to intended redistributional effects of the new fee schedule. In other cases, however, unintended consequences may have resulted. The Commission believes that it is important to monitor the impact of payment changes on different types of physicians and to sort out, where possible, the intended and unintended effects of the reforms. Where unintended effects are identified, further refinements of the fee schedule may be necessary. Where intended effects place a greater burden on physicians than is reasonable, the underlying causes may have to be explored.

Testimony to the Commission in December 1991 highlighted the concerns of many groups of physicians. Many remained concerned about the baseline adjustment for the volume and intensity of services (HCFA's new name for the behavioral offset) used in calculating the conversion factor. Some raised issues, such as payment for electrocardiograms (EKGs) and the payment rules for new physicians, which require legislative action. Others, including multispecialty referral centers and academic medical centers, suggested that inequitable payment for physicians treating the most severely ill patients is one of the key unresolved issues in the fee schedule. Still others pointed to areas where they believe further refinement of relative values is necessary and expressed concern about the process for making such changes. Evaluation of these assertions and correction of any remaining inequities is vital for assuring credibility within the physician community.

A Strategy for Refinement

From the time the fee schedule was adopted, it was assumed that an ongoing series of changes would be necessary in the system of coding and relative values so that all physicians would be compensated as fairly as possible. HCFA has already addressed some of these refinements and changed a large number of relative values in publishing the Final Rule. In other areas, HCFA has promised further examination and has left all of the RVs open for additional comment. The Commission is pleased that HCFA has, in effect, taken ownership of the relative value scale by moving beyond the starting point of the study by William Hsiao and his colleagues at Harvard University (Hsiao study) and by taking responsibility for making the RVS as good as possible.

It is, however, premature to draw firm conclusions about the effect of these changes. HCFA has chosen to address many concerns on a code-by-code basis, implying that it sees the need for only incremental changes. In addition, where HCFA has described its general process for making code-by-code refinements, it has not provided a complete description of the methodology used or a full explanation of all of the changes reflected in the Final Rule. More analysis in some areas may reveal whether code-by-code adjustments will adequately address some of the broader issues or whether further systematic changes are needed.

The Commission remains concerned about a number of issues. One of the most important is the adoption of the new set of codes published in the 1992 *Physicians Current Procedural Terminology* (CPT) for evaluation and management services and the establishment of relative values for those services. Other key concerns relate to the overall accuracy of the RVs and the process by which they are set and revised.

HCFA already has the authority to move ahead in these areas and, in some cases, has done so. The Commission calls on HCFA to continue the refinement process, moving more swiftly and more extensively toward dealing with some of the major unresolved issues. It also encourages HCFA to make this process as open as possible to a wide variety of interested parties.

As different groups of physicians begin to project and then to measure the effects of the new fee schedule on their revenues, the Commission expects to hear a growing number of calls for changes and occasionally for exemptions from one or more elements of the fee schedule. With HCFA committed to continued refinement of the fee schedule, the Commission believes that problems experienced by some of the providers that serve Medicare beneficiaries with more severe illnesses are better addressed by resolving the remaining problems with the fee schedule. It therefore prefers to preclude any strategy of exempting providers from the fee schedule. The approach of pursuing fee schedule refinements disrupts least the current move toward a resource-based method of paying physicians, while potentially solving many of the underlying problems affecting particular groups of physicians. It has the further advantage of maintaining the basic incentive structure inherent to the fee schedule and avoiding special treatment for a limited number of providers.

Further refinements, including potential development of a severity modifier, may go a long way in eliminating some of the unintended consequences of reform. At the same time, any delay in correcting underlying problems might have adverse effects on patient care and access. The Commission believes that it is important to monitor the implementation and refinement of the fee schedule for unintended adverse consequences on specific groups of physicians. The following sections examine several of the specific areas where refinements have been suggested in the past and may still be necessary in the future.

PAYMENT POLICIES FOR INVASIVE SERVICES

The principle for a payment policy for invasive services was established in OBRA89. In that legislation, the Congress specified that payment for surgical procedures should reflect a global service definition that encompasses both preoperative and postoperative services. HCFA has chosen to implement this policy by establishing two categories of invasive services: (1) major surgery and (2) minor surgery and nonincisional procedures. In general, the policy establishes that the surgical global fee includes not only the procedure itself but also all services and visits (occurring within an appropriate time period) normally furnished by the surgeon before and after the procedure.

For the first category, major surgery, HCFA has established that payment will encompass services provided during a preoperative period that begins the day before surgery and a postoperative period that ends 90 days afterwards. The second category includes designated minor surgical services as well as endoscopic procedures. For these services, the global payment will generally include those services provided on the day of the procedure and a postoperative period that is defined as either zero or 10 days, depending on the classification of a particular procedure. Generally, minor surgeries are given a 10-day postoperative period, and endoscopies have a zero-day period.

The global surgery policy also provides in general that services unrelated to the condition requiring surgery may be billed and paid separately from the global surgical fee. In addition, complications that require a return to the operating room (OR) are considered to be separately billable services. HCFA has established a new set of payment modifiers to help physicians identify these various exceptions to the global surgery policy.

The policies set forth in the Final Rule represent a substantial clarification and specification of the global surgery policy beyond that proposed in the NPRM. Whereas the Commission has strongly supported the general approach to paying for invasive services, it was critical of some of the elements in HCFA's original statement of this policy. In its comments on the

NPRM, the Commission raised several issues. These included the need to establish a consistent and rational policy for categorizing invasive services, necessary refinements in relative work values for surgical global services to make them consistent with HCFA payment policies, and the urgency of educating physicians and carriers about both the payment policies and the categorization of services. HCFA made substantial changes in these policies in the final regulations and successfully accommodated a number of the concerns raised by the Commission. Although some questions still remain, the policy on invasive services as implemented on January 1, 1992, is a considerably better one than that articulated by HCFA previously.

Categorizing Invasive Services

The Commission previously argued that, in the NPRM, there was no "clear policy specifying which invasive services should be paid as surgical global services and which should be paid as nonglobal procedures. Instead, it appeared to differentiate nonglobal from global invasive services according to the 'starred' procedures in CPT" (PPRC 1991b).[8] The final regulations are a significant step forward, beginning with the fact that the category to which the procedures belong is clearly and explicitly designated. HCFA has identified in the Final Rule which services are paid as major surgery under the global surgery policy (with a global period of 90 days) and which are paid as minor surgery (with a global period of zero or 10 days).[9] HCFA has also recategorized many services (including some of the examples given in the Commission's comments). As a result, Medicare payment policies are no longer based on the "starred" procedures in CPT.

According to analysis by the Commission, about 15 percent (386 of 2,533) of the CPT codes that were treated as global services in the NPRM (based on the Hsiao study's classification, in turn based on CPT) were recategorized as minor surgery. At the same time, very few (4 of 291) of the codes previously listed as starred procedures were recategorized as major surgery. Although there is no specific indication by HCFA about how these decisions were made, this recategorization marks a major step forward.

Still, problems may exist for closely related invasive services, where one service is treated as global and another is not. Even though there are good clinical reasons for such distinctions (for example, a planned tracheostomy versus an emergency tracheostomy), physicians may react initially to the differences in work values and see inequities in payment. In addition, when differences are not logical to the physician, he or she may bill incorrectly for services related to the procedure.

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[8] "Starred" procedures are defined by CPT as those procedures for which "because of the indefinite pre- and postoperative services the usual 'package' concept for surgical services cannot be applied."

[9] The category "nonglobal" procedure, used by the Commission in previous discussions, has been replaced by the category of "minor surgery and nonincisional procedures," the latter being paid on the basis of a global policy, albeit one with a shorter timeframe.

The Commission assumes that HCFA will make further refinements as inconsistencies are pointed out. Nevertheless, improper categorization may not be a major problem to the extent that HCFA has established clear policies allowing physicians to bill separately for procedures and EM services unrelated to recovery from the operation (using various modifiers established for this purpose).[10] This conclusion further assumes that the RVs accurately reflect the services included in the global package and that physicians understand how the policies apply.

As the Commission noted in its comments, the fee schedule "will result in accurate and equitable payment only if physicians and carriers know the category to which each code has been assigned, the component services that are included in the payment for each code, and the component services that can be billed separately" (PPRC 1991b). The Commission believes it is important that HCFA make a concerted effort to educate physicians or carriers about these issues.

Although some concerns remain, the changes made in categorizing invasive services should help considerably in ensuring that payment rates are equitable and that physicians can bill for services in a way that is consistent with the underlying payment system.

A Global Policy for Major Surgery

In defining a global surgery policy for major surgery in the NPRM, HCFA proposed a 30-day preoperative period and a 90-day postoperative period. Many groups, including the Commission, objected to the lengthy preoperative period, and the final regulations establish instead a one-day preoperative timeframe. This change is not expected to exclude many services from the global payment. It will, however, reduce documentation that would have been required for surgeons to receive separate payment for various preoperative services necessary to stabilize seriously ill patients prior to surgery.

Under the policy established in the Final Rule, the global fee for major surgery includes all preoperative visits, in or out of the hospital, by the surgeon beginning the day before surgery; all intraoperative services that are normally part of a surgical procedure; and all services during a 90-day postoperative period. The surgeon can be paid separately for the initial evaluation, all services for unrelated problems, and all medically necessary return trips to the operating room for complications (*Federal Register* 1991b).[11]

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[10] Use of modifiers may, however, require some documentation, which could delay payment.

HCFA's clarification of the global surgery policy is significant. Under this policy, physicians are allowed to bill separately both for EM services provided during the postoperative period that are unrelated to the prior procedure and for unrelated procedures. HCFA defines such services as those "for a problem unrelated to the diagnosis for which the surgery is performed" or "for an added course of treatment other than normal recovery from the surgery" (*Federal Register* 1991b).[12]

In cases where complications arise after surgery, HCFA has indicated that physicians may bill separately for related procedures during the postoperative period only if that procedure requires a return trip to the OR. The Commission would prefer that HCFA also exclude from its definition of the global service any procedural services related to complications that do not require a return trip to the OR. HCFA appears neither to have adjusted RVs to reflect these services nor to have adopted a complications modifier for this situation.

Multiple Surgery. In the final regulations, the policy on multiple surgeries (those with separate codes) performed by one surgeon on the same day was changed. Previously, the physician would have received 100 percent of the global fee for the highest-value procedure, 50 percent of the global fee for the second most expensive procedure, 20 percent for the third, and 10 percent for each succeeding procedure. The Commission previously expressed its concern that this policy might overstate the savings in resource costs that are achieved in cases of multiple surgery and called for a more accurate calibration.

In the Final Rule, HCFA revised its policy. Physicians will continue to receive 100 percent for the first procedure and 50 percent for the second, but will be paid 25 percent for the third, fourth, and fifth procedures. (Procedures after the fifth will require documentation and carrier review.) It is important to note that, when different surgeons perform different operations on the same day, they each get full payment. In addition, the multiple-surgery policy does not apply to all procedure codes (for example, dermatology). The Commission believes that, while the new rule is still not resource-based, it is probably closer to an accurate estimate of the savings achieved.

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[11] Four new payment modifiers have been established to facilitate separate payment for services excluded from the global service policy. Modifiers 24, 25, 78, and 79 allow physicians to certify that their services meet the specifications indicated for those modifiers. Because a single fee is assigned to a global service, modifiers 54 (surgical care only), 55 (postoperative management only), and 56 (preoperative management only) may be used for the purpose of splitting the global fee in those circumstances where different physicians provide preoperative or postoperative care. HCFA has placed certain limits on the use of these modifiers.

[12] Some ambiguity remains in interpreting concepts such as unrelated problems, added courses of treatment, or complications. It would be helpful if HCFA could provide additional direction to its carriers and to physicians in defining these terms.

Payment Policy for Trauma Surgery. The global surgery policy seeks in general to provide predictable, equitable, and timely payment for physicians while ensuring protection for payers from potential gaming. At the present time, however, these goals are not readily attainable for trauma surgery. In commenting on the proposed global surgery policy in the NPRM, the Commission questioned whether certain modifiers would appropriately adjust payment for special types of surgery that routinely involve multiple operations. It went on to recommend that HCFA develop unique payment policies in such areas.

Trauma surgery differs from most major surgery in two important ways. First, it typically involves multiple operations provided by several physicians. The amount of work and degree of each physician's participation in the course of treatment before, during, and after the procedure varies on a case-by-case basis. Frequently, for example, one physician may provide most of the preoperative and postoperative care for all of the surgeries performed. Second, for any given surgical procedure code, the mix of services is highly variable and unpredictable because different trauma patients have dissimilar constellations of injuries that greatly affect their overall condition and need for medical intervention. For severely injured patients, critical care is typically necessary even when the surgical procedures themselves — performed separately and on an elective basis — would rarely require it.

HCFA provided limited clarification for payment for multiple trauma surgery in the Final Rule. Whereas multiple trauma involves a number of different surgeons operating on different body parts at the same time, HCFA has stated that each physician will be paid separately for his or her services. (The multiple surgery policy applies to more than one surgery by the same surgeon on the same day.) Further, nationally recognized modifiers are available to bill for additional services beyond the global fee or to permit allocation of the global fee to more than one physician. They may not, however, adequately describe the circumstances of multiple trauma surgery, where extensive management and procedures may be necessary to stabilize and monitor the patient and where multiple physicians are typically involved. Physicians are instructed by HCFA to use the unusual services modifier (modifier 22) when unusual circumstances justify increased payment. In general, however, the need for documentation and individual carrier decisions when modifiers are used may add to the hassle factor for affected physicians, seriously delay payment, and lead to variable and potentially inequitable payment.

One of the challenges of developing a payment policy for trauma is to account adequately for the widely varied and unpredictable mix of services required to care for trauma patients and to pay multiple physicians fairly for their work. At the same time, it should protect payers against potential abuses such as double billing that might occur if one physician bills for postoperative care that is in fact provided by others. The payment policy should also provide a uniform approach for all parts of the country and should account for the coordinated approach to trauma care that is commonplace in major trauma centers.

The Commission believes that revising the current global surgery policy as it applies to trauma and improving payment for critical care could substantially address these concerns.[13] In addition, some clarification could be achieved by developing codes or modifiers that help separate the care of trauma patients from that of other patients and, among trauma cases, to distinguish traumas of different severity. There is some research that may offer help in future initiatives to develop such codes or modifiers based in part on the injured patient's condition.[14] The use of such indicators could potentially reduce the wide variation in mix of services now seen under procedure-specific codes.

The Commission believes that substantial improvement in payment equity for trauma surgery could be achieved by disaggregating certain components of the surgical global fee. First, the global fee for identified trauma cases should not include a preoperative component.[15] Instead, the evaluation and stabilization of an injured patient should be paid separately under appropriate EM codes. Second, those surgeons performing surgical procedures should be paid for the intraoperative portion of the global fee. Finally, payment to physicians for postoperative care (including critical care and other EM services) should reflect each physician's actual postoperative work associated with the related surgical events. Thus, separate payments could be made to surgeons providing postoperative care directly related to their procedures and to other physicians, including intensivists, who offer broader postoperative care to a severely ill patient recovering from multiple surgeries. Another option would be to pay all physicians providing postoperative care appropriate shares from the combined postoperative portions of the global fees for the multiple surgeries. As a whole, this proposed policy is intended to provide equitable payment that accurately reflects the work performed by multiple physicians and the variable services required by trauma patients.

A Global Policy for Minor Surgery and Nonincisional Procedures

In the NPRM, HCFA proposed a uniform policy for those services classified as minor surgery or nonincisional procedures whereby the Medicare fee included all preoperative and postoperative services directly related to the procedure that are performed on the day of the procedure and for 30 days thereafter. This policy elicited considerable comment, with the Commission recommending a timeframe substantially shorter than 30 days.

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[13] Improving payment for trauma surgery depends heavily on correction of payment problems for critical care. Equitable payment for critical care visits under the Medicare Fee Schedule is discussed later in this chapter.

[14] Valid patient condition-based classifications for injury have been developed for predicting hospital costs. These approaches have potential application for physician payment, but require further development for such use (MacKenzie et al. 1988, 1990, and 1991; Young et al. 1990; Young and Macioce 1991; Young et al. 1991).

[15] Surgery for trauma is identifiable on claims forms by ICD-9 injury diagnosis codes.

In the Final Rule, HCFA shortened the postoperative timeframe from 30 days to 10 days for most minor surgical procedures, including many of those identified with a star in the CPT, and to zero days for most endoscopies. The Final Rule indicates explicitly which procedures have a 10-day postoperative period and which have a zero-day period. As with the policy for major surgery, the global fee generally includes all services that are part of the procedure itself, any visit on the day of the procedure, and all postoperative services in the 10-day global period, where applicable. The physician can bill separately (with appropriate use of modifiers) for unrelated services or for treatment of the underlying condition (*Federal Register* 1991b).

Paying for Concurrent Care

Concurrent care refers to those situations where more than one physician provides nonconsultative services to the same patient. Developing an effective policy for concurrent care is complicated, since it must assure patients of concurrent care when their primary physician cannot manage a particular problem, but must protect payers from bills for "social visits." In addition, the policy must be consistent with payment policies for global surgery and critical care. HCFA has a national policy on paying for concurrent care, but it appears that carriers may interpret this policy unevenly.[16] HCFA states in the Final Rule that an expanded specialty list under development will help. To the extent, however, that specialty designation does not correlate well with a given physician's ability to manage a particular condition, carriers must rely heavily on their evaluation of medical necessity in making decisions. Any further direction HCFA can offer to the carriers in clarifying the policy on concurrent care and in increasing uniformity of its application would be helpful.

CODES

Under the Medicare Fee Schedule, coding issues are extremely important because it is not possible to assure equitable payment under a national fee schedule unless each code represents a similar amount of work to all physicians who use it. In fact, coding is more important than previously because there are fewer variations in payment and no specialty differentials. The Commission in its comments on the NPRM identified a number of coding problems that prevent the assignment of accurate and equitable RVs to services. One concern was that certain services may not have codes. Another was that certain CPT codes encompass a broad range of services that entail substantially different amounts of work. To the extent that physicians use these codes only to bill for services that are at the high (or low) end of the range of work, there is a potential inequity in the fee schedule.

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[16] Carriers are instructed by HCFA's *Medicare Part B Carrier's Manual* to decide (1) whether the patient condition warrants the services of more than one physician on an attending (rather than consultative) basis and (2) whether the individual services provided by each physician are reasonable and necessary.

Adoption of a resource-based payment system places new requirements on the coding system because, to provide a sound basis for equitable payment, each code must represent a similar amount of work to all physicians who use it. Although coding decisions remain external to the payment process for the most part, HCFA is in a good position to articulate the needs for coding changes.[17] Thus, for example, coding recommendations are brought to HCFA's attention through the comment process. Nevertheless, in the Final Rule, HCFA provides neither a specific evaluation of codes that may have been changed nor a discussion of priorities for future coding changes. The Commission urges that HCFA directly communicate to the CPT Editorial Panel the coding needs for a resource-based payment system in order to provide a framework for consistent coding decisions.[18]

Coding Issues for Evaluation and Management Services

The issues for EM services are rather different from those for procedural services because of the development of a new coding structure for visits and consultations that allows accurate assignment of relative values in the fee schedule. The Commission last year put forth a recommendation for a new visit coding system (PPRC 1991a). In the NPRM, HCFA signaled its intention to incorporate into the fee schedule a new system of visit codes being developed by the CPT Editorial Panel. Visits in this system are divided into (1) classes, based on the place or type of service (such as office, inpatient, nursing facility, or consultation) and type of patient (new or established); and (2) levels, based on the type of history, examination, and medical decisionmaking involved (up to five levels within each visit class). For each class and level, the codes include a detailed description of the content of that type of visit, along with (for most visit classes) the typical time needed. This system has many elements in common with the Commission's plan, including the use of time and different visit classes, but varies significantly in its approach to describing the content of visits.

In the Final Rule, HCFA formally adopted the new CPT visit codes, which have changed in some respects since the NPRM, and clarified its interpretation of CPT's coding definitions.[19] In reaffirming its decision to base the RVs for visits on the definitions in the 1992 CPT, HCFA indicated its belief that "the PPRC descriptors do not adequately encompass the variation in the complexity of the evaluation and management services that are furnished in visits in divergent settings and circumstances" (*Federal Register* 1991b).

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[17] HCFA does maintain the ability to add codes to those in the CPT, but this option is rarely exercised.

[18] HCFA should take on this responsibility in addition to maintaining its seat on the CPT Editorial Panel.

[19] One important change was to split consultations into three classes instead of two: one class for all outpatient consultations, separate classes for initial and follow-up inpatient consultations.

The selection of a coding system for visits is a "done deal," and physicians are now required to use the new codes. The Commission, however, remains concerned about several issues first raised in its comments on the NPRM. Many of these issues were aimed at the assignment of relative work values to the new visit codes, but the Commission also expressed its concern about how physicians will interpret the codes and HCFA's apparent assumptions about that use.

The Commission is also concerned about potential definitional problems for several of the visit codes. Physicians have been indicating considerable uncertainty about use of the new codes. For example, some are unsure of how to code properly when patients present with multiple problems; others are confused about the appropriate use of critical care codes or codes for visits to patients in nursing facilities.

The Commission is concerned that the codes will send a mixed message to physicians and to carriers, especially to the extent that visit descriptions and typical times are not congruent. If physicians are uncertain about the correct interpretation of the codes, they will find them difficult to use and their use of the codes will not be uniform. As a result, the Commission fears that some physicians may deal with the uncertainty by upcoding, whereas carriers may find justification for considerable downcoding. HCFA appears less concerned about these issues, asserting that its studies indicated "that physicians can easily and reliably use the new codes without substantial difficulty" (*Federal Register* 1991b).

The crosswalks established by HCFA to estimate how physicians will use the new codes appear to the Commission to be consistent with the assumption that physicians will not use them according to the typical times stated in the visit descriptions. HCFA rejected the Commission's conclusion, arguing that the crosswalks are based on the "closest clinically equivalent code, with duration of the visit being a secondary factor" and that the inclusion of time "will help physicians to decide the level of service in borderline cases" (*Federal Register* 1991b). The Commission is concerned that HCFA has not addressed this issue fully or adequately and plans to monitor use of the new visit codes, including variations in use by specialty and geographic area, both to check the accuracy of the crosswalk assumptions and to ensure that codes are used in a predictable and uniform manner.

Modifier for Special Patient Characteristics/Needs. Previously, the Commission recommended that physicians be allowed to code — using a special patient characteristics/needs modifier — visits for patients with communication barriers, disabling cognitive or physical impairment, or an unusual need for counseling or coordination of care. It seems reasonable to expect that it takes longer to provide care to a patient with, for example, impaired hearing or chronic physical impairment (requiring assistance in two or more activities of daily living). HCFA did not adopt such a modifier because it does not believe these visits entail "substantially more work" or that any extra work associated with such patients does not "reasonably average out for physicians" (*Federal Register* 1991b).

The Commission believes that physicians will find it difficult to make efficient use of their time when treating patients with special needs and will view the coding system as a disincentive to see such patients. The Commission maintains that the special patient characteristics/needs modifier should be an important part of the coding system for EM services and that the requirements for use of the modifier are unambiguous and verifiable.[20] If such a modifier is not available for payment, there is a potential adverse impact on certain specialties, such as geriatrics and rheumatology, and certain types of patients, including the most frail elderly and disabled patients.

New Patient Definition. CPT defines a "new" patient as one who has not been seen by an individual physician within three years. HCFA interprets the definition of "physician" to include all physicians practicing in the same group and billing with the same billing number. Thus, once a patient has been seen by one physician in a group practice or referral center, that patient is defined by HCFA as "established" when seen for the first time by another physician in the same group practice or referral center within three years. This definition applies even though the second physician may be in a different department, specialty, or geographic location than the first physician.[21] HCFA's interpretation potentially leads to inequitable payment since a second solo practicing physician (even in the same specialty) can classify a patient as new, whereas a second physician in a different department of a large referral center would be required to classify the patient as established. This problem is further exacerbated because the highest-level office/outpatient visit code for an established patient (99215) is defined as a visit of about 40 minutes, compared to the highest-level visit for a new patient (99205) of 60 minutes. Developing a definition of new patient is complicated since it must assure equitable payment among physicians in different practice arrangements, while protecting payers from potential gaming, such as rotating visits among physicians in a group practice. It may be difficult to monitor compliance uniformly under alternate definitions.

Critical Care. Two critical care codes are included in the Medicare Fee Schedule, one for the first 60 minutes of critical care (99291) and one for each additional 30 minutes (99292). Each code, unlike all other visit codes, includes procedures, so that physicians are supposed to bill only for the total time spent with the patient and not bill separately for procedures performed during that time.[22] These codes, according to CPT, specifically apply to circumstances in which the "constant attention of the physician" is required.

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[20] The one exception that is specified in the CPT involves cases where counseling or coordination of care dominates (defined as more than 50 percent) the physician-patient encounter. In such cases, physicians may consider time to be the key factor in determining the level of the visit.

[21] Even though HCFA's interpretation of physician is meant to include all physicians within a practice, some group practices (e.g., in some academic medical centers) operate under more than one carrier billing number (usually different numbers for different departments). This may create confusion about appropriate billing, affect compliance with the ruling, and make monitoring difficult.

There are several problems with payment for critical care, some of which result from the elimination of certain CPT codes and others that follow from either the assignment of relative values to the two new critical care codes or the payment policies that are being applied.

To the extent that critically ill patients do not always require the constant attention of a physician, the critical care codes are ambiguous. Effective in January 1992, additional codes that described more limited encounters with critically ill patients (99171-99174) were deleted from the CPT and thus are no longer recognized by HCFA. These four codes represented approximately 80 percent of all critical care visits identified in the 1989 Part B Medicare Annual Data (BMAD) file, but HCFA did not crosswalk them to any new codes. The CPT refers physicians to the subsequent hospital care codes (99231-99233) "when a patient is not critically ill," but is ambiguous in a circumstance where the patient is critically ill but does not require the constant attention of the physician. Physicians will be underpaid if they use the subsequent hospital visit codes and if their case mix is typically composed of critically ill patients requiring a service at the high end of the range of work under these codes.

These decisions represent a major change in coding for critical care visits, leaving great uncertainty about the implications of the Medicare Fee Schedule for payment for critical care. This uncertainty is exacerbated by the elimination of specialty differentials to the extent that codes are used by physicians in different specialties. The Commission's concern is that these coding changes have created confusion among physicians and carriers about how to bill and pay for visits provided to critically ill patients, and that the result may be a lack of uniformity in billing and payment.

The inclusion of procedures in the new critical care EM codes may also lead to confusion and inaccurate payment. Numerous procedures are frequently performed in conjunction with visits in order to monitor and stabilize critically ill patients. Historically, intensivists have been paid separately by Medicare for procedures. Under the Medicare Fee Schedule, payment for at least some of these procedures is included in the critical care visit fee. The assigned RWV for these visits does not appear to reflect this additional work as evidenced by the intensity (work per unit of time) of these codes compared to other visits (discussed in more detail later in the chapter). As a result, physicians may be encouraged to unbundle their services by billing differently for visits based on whether procedures were performed during a particular visit.

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[22] CPT gives examples of procedures that are included in the critical care codes: placement of catheters, cardiac output measurement, tube thoracostomy, control of gastrointestinal hemorrhage, electrical conversion of arrhythmia, endotracheal intubation, management of mechanical ventilation, and blood gas monitoring. It is unclear whether this is a definitive list or whether all procedures performed during a critical care visit are included in the visit payment.

The potential for payment inequity and the inefficient provision of services to critically ill patients is exaggerated by the absence of a clear policy that guides the conditions for payment. Currently, the CPT description encompasses a state of illness for which care may be provided by an intensivist, a consultant, or a primary care physician. Given that the current RWVs for the critical care codes do not measure accurately the work involved, payment will be inequitable if some physicians are permitted to bill using regular visit or consultation codes as well as procedures codes, whereas other physicians are required to bill under critical care codes. This may encourage physicians to request unnecessary consultations in order to limit their actual work while billing under critical care codes. The situation becomes even more complex when physicians or carriers have to determine whether an EM service was related to a previous surgery or can be paid separately as an unrelated service. The inherent interaction between a surgical event and the compromised nature of other body systems in critically ill patients may make it difficult for carriers to distinguish appropriately when a critical care visit is essentially unrelated to the surgical event. For example, surgery for a fractured femur may in rare instances precipitate a pulmonary embolus, a condition frequently necessitating critical care. It is unclear whether EM services for the respiratory failure would be considered unrelated to the surgical event and thus paid separately.

The Commission believes that — at least in the short term — payment for critical care visits should exclude procedures, because of the difficulties in establishing accurate RWVs that incorporate procedures. Codes are needed that describe the full range of evaluation and management services required by critically ill patients. Such changes would help address the serious and immediate problems in payment for critical care being reported by many physicians.

The Commission is also interested in exploring a comprehensive policy to clarify the conditions of payment for critical care that would ensure payment equity, as well as the effective and efficient provision of these resource-intensive services. Such a policy might involve paying for all critical care services on the basis of aggregate time, having first established a minimal threshold for payment based on the patient's condition. Procedures could be bundled in the visit, provided that the assigned RWV measures their inclusion and the resulting payment reflects the work involved. To the extent that it may be difficult to determine when a critical care visit should be paid separately or included in the global surgery fee, a mechanism is needed to ensure fair and uniform interpretation. For example, HCFA may want to determine which of the surgical global services typically require critical care visits. Payment for critical care that is considered part of the global fee should be made directly to the physician providing the service. Mechanisms might be developed to encourage the provision of critical care by physicians who are experts in this area in efficient and effective settings and to ensure the appropriate use of concurrent and consultative care.

ASSIGNING RELATIVE WORK VALUES TO CODES

Relative work values are established in the Final Rule for some 5,500 services, each with a unique CPT code.[23] Roughly half of these values, according to HCFA, were based on the Hsiao physician RWVs, whether from Phase I, II, or III of the Hsiao study. (These included both extrapolated and surveyed values.) The other half of the RWVs were established by HCFA: "It may have been a refinement of a [Hsiao] value, or a gap fill for a code for which [Hsiao] did not provide a value. These include codes reviewed by carrier medical directors" (*Federal Register* 1991b).

The RWVs in the Final Rule represent substantial changes from those in the NPRM. About 3,600 codes (or about two-thirds of all the codes) were included in the NPRM. The Commission's analysis reveals that RWVs for about 13.5 percent of all codes changed (upward or downward) by more than 25 percent of the original NPRM value; about one-fourth changed by more than 10 percent. For codes that are considered unchanged, the RWVs were revised slightly downward (by less than 2 percent), presumably to maintain the reference code (99213, office visit for established patient, level 3) at a level of 1.0 total RVUs.

Many of the larger changes in the RWVs reflect changes in the categorization of invasive services in terms of global surgery policies. In particular, values have decreased for those services recategorized with shorter global periods. For most services already categorized as minor surgery, values increased because HCFA had not included preoperative and postoperative work in the calculation of RWVs for the NPRM.

A Process for Refinement

HCFA used a panel of 25 carrier medical directors (CMDs) to make refinements in codes for other services on a code-by-code basis. The CMDs were used in a multistep group process to review RWVs for codes that either did not have assigned RWVs or had disputed RWVs. CMDs were given a list of reference services to use in estimating work; then they were surveyed and asked to estimate work associated with the services in question. These results were resubmitted to small groups of CMDs in a structured group process, after which they were asked to re-rate work values. Where necessary, matrices were developed for families of closely related services (*Federal Register* 1991).

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[23] Excluded from this discussion are codes in the Final Rule for anesthesiology, durable medical equipment, and various codes for services excluded from Medicare payment. Furthermore, where the Final Rule lists technical and professional components — based on modifiers — in addition to total RVUs for the code without a modifier, only the latter codes are included in this discussion.

The Commission found that, for about 319 codes in the major surgery category (nearly 9 percent of all codes that appeared in both the NPRM and the Final Rule), RWVs were revised substantially upward or downward — that is, by more than 10 percent. The process HCFA used is consistent with the spirit of the Commission's prior recommendation of moving away from research toward the use of expert panels, although a number of questions remain. One is whether the carrier medical directors are the best group to address refinement issues and whether an adequate range of specialties was represented on the CMD panels. A second question deals with the data used in this process. The CMDs were provided with summaries, but not the data, from other studies and with alternative RWVs suggested by specialty societies in selected instances. Whether broader availability of such data would be seen as informing the process or biasing it is, however, an open question.

HCFA has indicated that change will be ongoing. To start that process, all relative values in the Final Rule are considered initial values, with a 120-day comment period through March 24, 1992. In inviting comments, HCFA has offered specialty societies some guidelines on the process it expects to use for refining values for the 1993 fee schedule. The 1992 process will, according to HCFA, resemble that used in 1991, but with two significant differences. First, the process will provide interested parties a chance to meet with the CMDs during public meetings. Second, practicing clinicians in the specialty whose services are being studied will join the CMDs for the deliberations (Buto 1992).

In preparation for this process, specialty societies have been given a list of 165 reference services to serve as benchmarks for the refinement process. This list, according to HCFA, includes commonly performed services that span the spectrum from the easiest to the most difficult and incorporates at least three services each major specialty performs. Commenters are asked to make direct comparisons between the service in question and one or more of the reference services (Buto 1992).

The Commission is pleased that the process for future refinement will be more open and will involve a broader spectrum of physicians. The credibility and acceptance of the fee schedule is enhanced to the extent that physicians believe they have been reasonably represented in the process and that they understand the basis for any changes.

Systematic Refinements

In its comments about the NPRM, the Commission suggested that systematic changes were needed in three critical areas: (1) to account for preincisional and postincisional operating room work and correct estimates of preoperative and postoperative time and intensity for management services in connection with the global fees for major surgery; (2) to account for preservice and postservice work for minor surgical procedures, other than endoscopies; and (3) to refine the pattern of work for EM services.

Global Fees for Major Surgery. Because few related services occur earlier than the day before surgery, shortening the preoperative period from 30 days to one day has little effect on relative work values. For the intraoperative period, the Commission is concerned that some of the work may not have been included in determining the RWVs. Particularly in specialties such as neurosurgery, orthopedic surgery, and cardiothoracic surgery, the principal surgeon performs a substantial amount of OR work in such activities as positioning patients or stabilizing patients as they go on and off bypass. The Commission thought that the independent study conducted by Abt Associates for the cardiovascular and thoracic surgeons documented a problem that exists for many specialties. HCFA rejected the overall findings of that study and appears not to have made a systematic response to the Commission's concerns. It did, however, use the study to identify values for review by the CMDs. Whether making code-by-code adjustments provided a satisfactory solution remains unclear.

Minor Surgery and Nonincisional Procedures. HCFA accepted the conclusion that work values for minor surgery were based on intraoperative work alone. In the Final Rule, the RWVs include work before and after the procedure and work associated with follow-up visits as applicable. HCFA states that these RWVs were generally supplied by Hsiao. These values were modified, however, where they appeared not to follow clinical practice or where the small sample of physicians surveyed appeared to make estimates unreliable. They were also modified where the carrier medical directors recommended different values after reviewing, for example, the uniformity of work values for closely related codes. In general, RWVs for follow-up visits were based on the assumption of a single office visit (generally level 1, 2, or 3) for an established patient (*Federal Register* 1991b).

These policy changes resulted in increased RWVs for nearly all nonendoscopic procedures that were classified as minor surgery in both the NPRM and the Final Rule. Nearly nine in ten of the codes now have RWVs at least 25 percent higher than in the NPRM; for most, RWVs are at least 50 percent higher. For those procedures reclassified from major to minor surgery, the RWVs were generally reduced substantially to reflect the exclusion from payment of services occurring on the day before surgery, or between 10 (or zero) and 90 days after surgery. Of course, physicians can bill separately for unrelated procedures during the global period.

RWVs for about half of the endoscopic procedures remained essentially unchanged, whereas values for most of the rest were substantially raised or lowered. Because the underlying payment policy was unchanged, these changes reflect a code-by-code review of the values for this family of procedures. The numerous comments on endoscopies led HCFA and the CMDs to devise "a matrix in which there was a clinically reasonable relationship for work for different endoscopies and a consistent relationship for each endoscopy among values for endoscopy alone, endoscopy with biopsy, and endoscopy with removal of foreign body." A hierarchy of work was thus established among the endoscopies and the RWVs were revised accordingly (*Federal Register* 1991b). The Commission believes this approach was a fruitful one and encourages HCFA to apply this methodology in other areas, as necessary.

Compression. A number of specialty societies, commenting on the NPRM, questioned whether RWVs for the most complex procedures in a particular family of services are understated compared to the RWVs for the least complex procedures. To the extent that such compression occurs within the fee schedule, physicians who specialize in the more complex services will be undercompensated in comparison to their peers who predominantly perform the less complex services. HCFA, in the Final Rule, chose not to make any blanket statement on compression; rather, it dealt with compression on a "code-by-code basis" (*Federal Register* 1991b). The net effect of these code-by-code adjustments remains unknown.

Several of the societies continue to argue that compression is a problem in their fields. To the extent that compression remains in the values, it may be one factor contributing to the revenue losses projected by large referral centers and others specializing in the most difficult cases.

Code-by-Code Refinements

As noted earlier, HCFA made substantial changes in the Final Rule (defined as changes of more than 10 percent) in over 300 codes where changes were not explained by definitional factors such as modifications in the global surgery policy. Where HCFA provides examples of the code-by-code changes it made with the advice of the CMDs, it generally appears to have improved the accuracy of the RWVs. Unfortunately, in most cases HCFA provides little basis to evaluate its decisions, both those where changes were made and those where values remained unchanged. In a number of instances where specialty groups raised specific issues, particularly where they provided specific comparisons among a set of codes, HCFA has made adjustments. In other cases, adjustments were not made. Although the Commission does not have any basis for judging independently all of the codes for which substantial changes in values were made, it has asked the affected specialty societies to review a number of the changes.

For example, the Society of Gynecologic Oncologists asserted in its comments on the NPRM that an extensive hysterectomy (58210) was undervalued relative to its two component procedures — simple hysterectomy (58150) and removal of pelvic lymph nodes (38770). In the Final Rule, the RWV for the extensive hysterectomy was increased substantially. The society also compared two surgical procedures to remove pelvic structures, one performed mostly by urologists (51597) and the other mostly by gynecologic oncologists (58240).

HCFA responded to the society's assertion that these surgeries are essentially identical in work and intensity; whereas the RWV for the urological procedure (51597) was 55 percent higher in the NPRM, it is only 23 percent higher in the Final Rule (Fowler and Berman 1991; Berman 1992).[24]

The Society for Vascular Surgery raised a number of issues in its comments on the NPRM about procedures that it believed (based in part on a study by Abt Associates) were incorrectly valued. The society has told the Commission that refinements included by HCFA in the Final Rule "have corrected many of the inconsistencies in the NPRM" although relative work for some major procedures is still "seriously underestimated" (Hertzer 1992). For a number of codes (35082, 35301, 35583, 35646, 37160, 37180), HCFA has made substantial adjustments in the direction suggested by the vascular surgeons. Yet for other codes (35102, 35091, 35092, 35566), the society argues that the RWVs still significantly underestimate the work and intensity involved in the procedures.

Another specialty society that provided a large number of specific examples of codes where it thought relative work values were out of line was the American Academy of Otolaryngology — Head and Neck Surgery. It stated, for example, that removal of the larynx (31365) is a far easier procedure than exploration of parathyroid glands (60500 and 60502), but that the RWVs for the former were higher than those for the latter. In the Final Rule, HCFA has lowered the RWVs for removal of the larynx and raised values for two different codes for exploration of parathyroid glands. Although the otolaryngologists may still believe the adjustments are inadequate, the changes were made in the right direction. Similar revisions were made based on comparison of a tongue fold operation (41010) and a cleft palate reconstruction (42200) (Goode 1991; Bierstein 1992).

Although problems undoubtedly remain in assigning accurate values to some codes, these examples illustrate that adjustments are being made as legitimate problems are identified. The real proof may come in how such problems are addressed over time. HCFA indicated within the Final Rule its specific intentions to investigate extensive changes in certain specialty areas during the coming year. The agency has, for example, suggested that it may increase values for some neurosurgery services and reduce values for some urology and ophthalmology services. The comment period opened by HCFA on the values published in the Final Rule will identify other areas needing refinement. Values established in the new Final Rule for 1993 may therefore provide a better test of the fee schedule's accuracy.

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[24] Berman (1992) has provided the Commission with two new examples of pairs of codes that seem inappropriately valued relative to each other in the Final Rule: two codes for construction of a vagina (57291 and 57292) and two codes for vulva surgery (56635 and 56640).

Relative Work Values for Evaluation and Management Services

Having adopted a new coding system for visits, HCFA has included in the Final Rule relative work values for all the new visit codes.[25] HCFA also described some of the methods used to derive these values. Getting the values right for visits is a high priority, because they account for more than 35 percent of physician payments and are important to a wide range of physicians.

The Commission is concerned that the RWVs established in the Final Rule for visits and consultations may lead to inaccurate and inequitable payment. In the Commission's comments on the NPRM, an analysis of the intensity of different EM services was offered. Intensity was defined as the number of relative value units per minute (using the typical encounter times included in the CPT definitions of the new visit codes). The Commission has repeated that analysis for the relative work values published in the Final Rule (Table 2-11).

It is reasonable to expect that different visit classes and different levels of visits should have different intensities of work. Yet the analysis shows that average intensities are rather similar across the 10 visit classes and that, within most visit classes, intensities are quite similar across levels (lengths) of visits. In particular, intensities for the four most common types of visits — office visits for new and established patients, and initial and subsequent hospital visits — are nearly identical. (In fact, the 16 individual codes in these four categories all have intensities between 0.035 and 0.038, despite the fact that the higher-level codes are supposed to represent much more complexity.) These results are comparable to those reported by the Commission in its comments on the NPRM (PPRC 1991b).[26]

In commenting on the NPRM, the Commission recommended revising the pattern of relative work values across classes of visits. It suggested that total work per unit of encounter time should be greater for new patient visits than for established patient visits, for initial visits than for subsequent visits, and for consultations than for nonconsultative visits. This pattern was not reflected at all in the actual intensities. In the analysis of values included in the NPRM, the total work per unit of encounter time was nearly identical for all classes of visits except

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[25] These include assigning values for visits for home services, nursing facility services, domiciliary rest home or custodial care services, emergency department services, and critical care services, none of which were included in the NPRM.

[26] The analysis has been extended from that reported previously, with the addition of intensities for four classes of visits (a separate class for office/outpatient consultations, two classes for nursing facility visits, and critical care visits), for which RWVs were not available in the NPRM. For several other classes — emergency department visits, home visits, domiciliary home visits, and confirmatory consultations — suggested times are not incorporated into the visit descriptions.

Table 2-11. Average Intensities for New Visit Codes in the Final Rule, by Visit Class

VISIT CLASS	AVERAGE INTENSITY[a] (RWVs/Minute)
Inpatient follow-up consultation	0.047
Critical care	0.041[b]
Office/outpatient consultation	0.038
Office/outpatient established patient visit	0.038
Office/outpatient new patient visit	0.037
Hospital initial visit	0.036
Hospital subsequent visit	0.036
Nursing facility subsequent visit	0.031
Nursing facility comprehensive assessment	0.030
Inpatient initial consultation	0.028

Source: PPRC analysis of relative work values.

Note: [a] Intensities were average across all visit levels for a particular visit class. In calculating intensities, the add-on values for EKGs were subtracted from the RWVs.

[b] Actual EM intensity is lower than this value because critical care codes, unlike other EM codes, include procedures.

follow-up consultations — a pattern that the Commission concluded "does not seem reasonable to physicians and runs counter to objective data" (PPRC 1991b).

The analysis of visit intensities based on the Final Rule reveals a pattern not as flat as that for the NPRM, but one that appears even less reasonable and even less in line with the Commission's recommendations (Table 2-11). The highest intensities are assigned to inpatient follow-up consultations (as in the NPRM) and to critical care, whereas the lowest intensities are associated with the two types of nursing facility visits and with inpatient initial consultations.

Panels convened by the Commission previously revealed patterns that physicians found reasonable. Members of both the Commission/AMA consensus panel on visit coding and the Commission's interspecialty panel thought that differences in effort between certain classes of visits were meaningful.[27] Specifically, higher intensity should be expected for new patient office visits than for established patient office visits, for initial hospital visits than for subsequent hospital visits, for initial consultations than for follow-up consultations, and for consultations than for nonconsultative visits.

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[27] For a complete discussion of the Commission's analysis of the pattern of work between different classes of visits, see Chapter 2 of its *Annual Report to Congress 1991* (PPRC 1991a). For more background on the interspecialty panel, see the Commission's report, *The Role of Specialty Societies and Physicians in the Commission's Evaluation of Relative Work Values* (PPRC 1991c).

Simply stated, the pattern of intensities reflected in the Final Rule bears no relationship to these expectations. Intensities are essentially constant for both types of office visits and for both types of hospital visits (Table 2-11). For consultations, the expected relationship is reversed, with follow-up consultations about two-thirds higher than initial consultations and consultations both higher and lower than nonconsultative visits. A comparison of these results with the projected changes in payments for the different EM services (Table 2-4) suggests that the observed pattern of intensities is affected by the old pattern of payments under CPR, the changes made in the fee schedule, and the crosswalks that link old codes with new codes.

Critical care has the second highest intensity level, as might be expected. These visit codes differ, however, from all the others because they incorporate procedures. Data are not available to permit a revised estimate of intensity that would allow for the work these procedures entail. Nevertheless, if the intensity estimates were revised to include only the EM portion of the critical care codes, they would be substantially lower, especially since procedures generally have a higher intensity than EM services. This finding further supports the need for changes in the coding of critical care, as discussed in an earlier section of this chapter.

Nursing facility visits (both comprehensive assessments and subsequent care) are among the lowest paid visits, with intensities that are about 15 percent to 20 percent below those for hospital or office visits. Yet there is no sound basis for assuming that the work and intensity involved in evaluating and managing nursing home patients should be any less than evaluating and managing patients in the hospital or in the office.

The failure of work intensities to reflect a meaningful pattern for the various classes of visits is a serious problem and could lead to serious inequities in payment in an area that affects most physicians and a high proportion of expenditures. Furthermore, the visit classes with the lowest intensities (and thus the lowest payment rates) tend to be those treating the sickest and most frail of the Medicare beneficiaries. As it did in reordering RWVs for endoscopies, HCFA may wish to encourage panels of physicians to establish a rank-ordering of intensities for the various classes of visits. From such an ordering, appropriate RWVs could be assigned to all of the visit codes.

Relative Work Values for Anesthesia

The primary issue in paying for anesthesia services was HCFA's proposal to replace actual time units used under CPR with average time units.[28] HCFA's decision was prompted by its concern that the start and end times for anesthesia services are difficult to determine and that payment for actual time is inconsistent with the way Medicare will pay other physicians under the Medicare Fee Schedule. In its 1991 annual report, the Commission considered alternatives to the use of actual time. It concluded that the best option was to continue the policy of paying for anesthesia services on the basis of actual time, also recommending the development of a better operational definition of anesthesia time.

In the Final Rule, HCFA decided to retain temporarily the use of actual time, while expressing serious reservations about paying for anesthesia on a different basis than other physicians' services. HCFA also indicated its plan to modify the definition of anesthesia time to involve the continuous actual presence of the anesthesiologist and a strong intention to continue analyzing the issue with the eventual goal of eliminating actual time.

A second issue raised by the Commission in its comments on the NPRM involved payment to certified registered nurse anesthetists (CRNAs). HCFA had proposed in the NPRM to modify the OBRA90 conversion factors for CRNAs so that nonmedically directed CRNAs would not receive higher payment than physicians. The Commission agreed, but urged that payments to CRNAs be resource-based. In the Final Rule, HCFA indicated that it would determine payment for CRNAs using allowable base and time units and that the CRNA conversion factor for nonmedically directed services would be limited by the physician anesthesia conversion factor in the locality.

Relative Work Values for Radiology

OBRA89 required HCFA to use relative values from the Radiologists' Fee Schedule (RFS) to pay for radiology services, adjusting the values so that they are similar to those for other comparable services. Two issues were raised by the Commission in its comments on the NPRM: the accuracy of the RFS relative values for individual radiology services and the rescaling of the RFS.

On the former issue, the Commission was concerned about the applicability of the RFS (developed by radiologists) to those radiology services performed by other physicians; data collected by the Commission appeared to corroborate this concern. The Commission recommended that RFS values be reviewed and refined through a process involving all specialties that provide radiology services. In the Final Rule, HCFA maintained that it is required by law to base RVs for radiology services on the RFS. It also noted that it must review the RVs at least every five years and that it would be receptive in the future to evidence of the need to revise the RVs for particular procedures.

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[28] Traditionally, anesthesia services have been paid using both base and actual time units. Base units represent the complexity, risk, and skill needed to perform the service.

On the latter issue, HCFA proposed to rescale the RFS relative values for professional component services by calculating an imaging rescaling factor. The Commission indicated its endorsement of HCFA's method. No change was made in the rescaling method in the Final Rule.

ADJUSTING PAYMENT FOR PATIENT FACTORS

The failure of the Medicare Fee Schedule to make any adjustments in payment for the severity of a patient's illness or the complexity of the procedure needed to treat that illness has been noted by a variety of providers as a serious factor threatening equitable payment. Tertiary referral clinics and specialty clinics, in particular, have called this problem to the Commission's attention. But one might argue that any physician — whether practicing in a multispecialty referral center, a teaching hospital, a small group practice, or in solo practice — who sees a disproportionate share of severely ill patients may be a loser in a system that assumes average patient complexity within the caseload of each physician.

The problems associated with severity may be manifested in a variety of forms. Appropriate codes may be lacking for the services these practitioners perform, or the relative work values may not accurately reflect the work and intensity involved in the more difficult cases. In addition, patient differences — ranging from age to comorbidity to the presence of traumatic injury — may change the work and intensity demanded even though the procedures are basically the same.

The idea of adjusting the Medicare Fee Schedule for severity of illness is not a new one. In 1990, the Commission stated that even if Medicare adjusters were added to the fee schedule, "payment might not be equitable to physicians who care for atypical populations.... Thus, a severity of illness modifier may need to be developed to modify fees for physicians who care for patients [with complex medical problems]" (PPRC 1990).

Multispecialty group practices and referral centers, in particular, believe that the need for some form of severity modifier is a priority issue, asserting that more complex cases and more severely ill patients are concentrated with such providers (Harrington 1991; Riddick 1991; Spoto 1991; Waller 1991). They believe that an adverse incentive is created if the fee schedule fails to recognize severity or complexity and that the mission of referral centers is jeopardized by such adverse incentives. As a result of this belief, the referral centers and the associations that represent them and other group practices have recommended that "Congress develop and adopt an adjustment to Medicare fee schedule payments to account for legitimate differences in case complexity" (Spoto 1991).

HCFA, responding to such concerns, noted that "physicians will be able to use the 'unusual circumstances' modifier when they believe that unusual circumstances justify increased payment" (*Federal Register* 1991b). Use of this modifier for a particular case requires submission of appropriate documentation to the carrier. Such documentation may be an undue burden to physicians whose caseloads are heavily weighted toward such patients.

In general, severity of illness can refer to a number of different situations. Three sets of circumstances help to illustrate how severity may interact with the fee schedule. First, severity can refer to situations where physicians perform procedures that are more complex than average. To the extent that such procedures fall into different codes from the CPT with different RWVs, the fee schedule already recognizes the greater severity, and those physicians with more severe caseloads will receive greater compensation. For example, separate codes exist for a simple hysterectomy and an extensive hysterectomy or for coronary artery bypass grafts with different numbers of grafts. Provided relative values are set accurately, physicians will be paid equitably for such procedures.

In other instances, severity can refer to situations where, for a given CPT code, some physicians perform — on average — more extensive procedures than others. (All CPT codes encompass a range of work, some defined tightly, others quite broadly.) Such situations may arise when particular doctors have greater experience and expertise that allows them to provide more aggressive treatment for a given diagnosis. Thus, for example, a code for excision of a supratentorial brain tumor may include operations lasting from two to ten hours. Cancer centers cite the circumstances of more complete removal of tumors, while preserving functional and cosmetic integrity (Rubin et al. 1991). When such variations fall within a single CPT code, they will not be translated into payment differences under the fee schedule.

Finally, patient differences can play an important role in determining severity. Some patients present with greater comorbidity or a history of past treatment; some may be older or generally less able to stand up to the rigors of surgery. In such instances, surgeries and other procedures may take more time or skill on the part of the physician. Specialists in gynecologic oncology argue that a hysterectomy on the typical cancer patient they see entails considerably more work than a hysterectomy on a relatively healthy 50-year-old patient (the baseline example in the Hsiao study).[29] Another example contrasts a patient undergoing colon surgery as a result of disease as opposed to a patient requiring the same surgery for a traumatic injury. Again, these variations are generally not reflected in CPT coding differences and thus do not result in higher payments under the fee schedule.

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[29] The Society of Gynecologic Oncologists has informed the Commission that it is surveying 10 medical centers to attempt a measurement of their patient profiles, with special attention to such factors as age; likelihood of spending time in the intensive care unit; length of hospital stay; degree of operative risk, using the scale developed by the American Society of Anesthesiologists; comorbidity, such as obesity, hypertension, and diabetes; and proportion of patients with cancer.

Direct evidence of severity of illness for Medicare patients is lacking for the most part. Indirect evidence can be addressed through some of the severity indexes available for hospital patients. Both the Ochsner Clinic and the Mayo Clinic have indicated that the hospitals treating their patients exclusively have substantially higher Medicare case-mix index values than comparable hospitals (Riddick 1991; Waller 1991). The issue, however, is whether case-mix severity is predictive of severity for individual physicians' services beyond what is already captured by CPT codes and their RVs. There may be other explanations for higher case-mix values as well. For example, it is possible that these values are higher because the clinics are more skilled at treating less severely ill patients on an outpatient basis.

Other evidence is suggested by an analysis done on behalf of cancer centers that are exempt from the Medicare prospective payment system (PPS) for hospitals. They performed a study based generally on the Hsiao methodology and found that estimated work was greater for their surgeons than for surgeons in other settings. They also looked at the frequency with which multiple (presumably, more complex) surgeries were performed at cancer centers as opposed to other facilities and found higher frequencies for the four specialties studied (Rubin et al. 1991). HCFA, however, rejected the study's results, concluding that services at these centers did not differ significantly from those furnished in other major medical centers.

The Commission believes that a number of steps are available for adjusting payment for patient factors. The first priority is to continue making refinements in codes and relative values. This process may eventually solve a substantial part of the problem. Some procedures commonly performed in referral centers or cancer centers may be identifiably different from those performed by other physicians; creating new codes where appropriate may increase payment equity. Second, certain broad indicators of patient differences lend themselves to adjustments to payment. Where patient age is systematically associated with more work, a Medicare adjuster (or a pediatric adjuster, discussed later in the chapter) may make payment more equitable. Where a patient has special needs or impairments, the modifier for special patient characteristics/needs will potentially make payment for visits more equitable (as discussed in an earlier section of the chapter). The final priority is to research the plausibility of a severity modifier, a task that is considerably more difficult.

Medicare Adjuster

One limited approach to correcting payments for severity of illness is to make an adjustment in situations where Medicare patients are on average more difficult to treat than non-Medicare patients. The Commission has previously discussed a Medicare adjuster that would increase by a fixed percentage the RWV for services to which it is applied. The Commission recommended that such a Medicare adjuster would be applied to services in which (1) the typical patient is not a Medicare patient and (2) substantially more work is required to provide the service to a Medicare patient than to a typical patient (for example, removal of an ovarian cyst, which entails twice as many postoperative hospital visits for an elderly patient compared to a 25-year-old patient) (PPRC 1991b).

The issue of a Medicare adjuster arises in part because the Hsiao study constructed a scale of work that applied more broadly than the Medicare population. Relatively few of the Hsiao vignettes described elderly patients. This fact makes it easier to adapt the fee schedule to other populations, but it may lead to inequitable payment under Medicare. HCFA did not include a Medicare adjuster in the Final Rule, but it acknowledged that the issue "warrants additional examination on a code-by-code basis" (*Federal Register* 1991b).

Severity Modifier

A more broadly based approach for handling severity of illness would be the inclusion in the Medicare Fee Schedule of some form of severity modifier. The Commission has discussed previously the possibility of a severity adjuster that goes beyond the Medicare adjuster to recognize those services where patients are more severely ill than the typical Medicare patient and where substantially more work is required to treat such patients. In addition, the Commission's recommendation for a special patient characteristics/needs modifier for EM services would help achieve equitable payment for physicians caring for complex patients.

During the past year, the Commission solicited comments from specialty societies and from an interspecialty panel of physicians on a variety of fee schedule issues. Among the issues raised was the effect of patient factors such as severity of illness, comorbidity, risk of complications, and body site on the relative work required to deliver a service. One suggestion emerging from this discussion was that a payment modifier for factors such as severity should capture substantial and systematic differences in work and be easily calibrated, verifiable, and not subject to gaming. Several such modifiers were proposed, including one for operative risk and one for recurrent or persistent conditions (PPRC 1991c). Others have suggested that, at least in the absence of alternate measures, measures of severity used in the hospital could be adapted to physician payment (Harrington 1991).

Given the lack of consensus on an appropriate measure of severity after eight years of experience with Medicare's hospital payment system, it is not surprising that there is no easy solution for physician payment. Clearly more research is needed to see whether an adjustment for severity is needed and, if so, how it could be implemented. In the end, it may be necessary to create different severity modifiers for different categories of illness.[30]

PRACTICE EXPENSES

Under the Medicare Fee Schedule, practice expense relative values are based on both the historical allowed charge for a service and its practice expense percentage (defined as the volume-weighted average of the practice expense share of specialists who perform the service). Malpractice expense RVs are based on a similar calculation. For historical charges, OBRA89 specified that 1991 average allowed charges be used to calculate relative values. HCFA obtained these values by "aging" data from 1989 to reflect policy changes implemented in 1990 and 1991.

Use of 1991 Historical Charges

The use of 1991 historical charges creates a distortion in relative values for those services for which Medicare payments were reduced as early steps toward resource-based payment. With practice expense relative values based on the already reduced historical charges, the reduction in payment for these overvalued procedures is exaggerated. Inequities in payment occur because in 1989 physician work RVs were available for only a limited group of services, and so overvalued services could be identified only from this group. With the use of a 1991 charge base, two similar services may have different payment levels under the fee schedule simply because one happened to be included in the early physician work research, not because they require different resources. Moving to a 1989 charge base would correct the inequities that result from the method currently used.

A similar inequity in payment may arise for those services for which new codes were added between 1989 and 1992. To create practice expense and malpractice expense relative values for the EM codes, HCFA used the crosswalks established to estimate how physicians would use the new codes. Even though there is not a one-to-one mapping between old and new codes, HCFA estimated the shares of old codes that it believes fit into the description of a new code — for example, 30 percent of visits coded as 90020 are estimated to fit the description of new code 99205. This crosswalk was used to generate an estimate of the historical charge for each new visit code. To the extent that the crosswalks are accurate, this method works reasonably well. Where crosswalks are inaccurate (a concern raised earlier in this chapter), this method tends to lock in the inaccuracies, unless the crosswalks are revised to take into account actual experience in using the new codes.[31]

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[30] Some research is under way in this direction. Patient condition-based classifications for injury and a measure of operative risk used by the American Society of Anesthesiologists were noted earlier.

For other new codes, however, HCFA has chosen a different method of estimating the practice expense and malpractice expense RVs. Instead of estimating the relationship between old and new codes as it did for EM services, HCFA has calculated values for these codes solely from AMA survey data on specialty revenue shares. These two methods may in fact yield rather different results; services will have higher practice expense values when the latter method is used if they are winners (i.e., if their 1992 fees, based on RWVs under the fee schedule, are higher than an equivalent historical charge). The Commission is concerned that such use of specialty revenue shares may lead to inequitable payments. Where new codes relate closely to the services provided under certain old codes, it prefers that the crosswalk approach be used.[32]

For new codes that represent new services, the Commission believes that HCFA should base practice expense and malpractice expense RVs on those for clinically similar services, where possible. Otherwise, values for new services are determined by only one part of the OBRA89 formula, practice expense shares, and not by historical allowed charges. While this proposed method would improve estimates for new codes under the OBRA89 scheme, the issue of determining values for new codes reinforces the Commission's commitment to the principle of resource-based relative values. Because resource-based RVs would not be tied to historical payment levels, they could be independently calculated for new services.

Site-of-Service Differential

In the Final Rule, HCFA described implementation of a site-of-service differential for 380 services that are delivered in both physician offices and hospital outpatient departments (OPDs), but are primarily performed in offices. The practice expense RV for these services will be reduced by 50 percent when they are provided in OPDs to reflect the fact that OPDs furnish and are reimbursed for some of the resources required for these services. This reduction will lower payment for these services by roughly 20 percent, since practice expenses typically account for over 40 percent of a service's total payment.

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[31] This issue is a particular concern for physicians who make visits to nursing facilities. Because these visits involve work newly mandated under federal legislation, physicians making them are concerned that the crosswalks are especially unreliable.

[32] For example, many interventional radiology procedures were given new designators in January 1992. The services provided under the new codes are identical, in many cases, to those provided under the old codes. The services provided may be analogous even where the service description has changed, since the new description may in fact depict the procedure being performed under the old code that created the basis for the charge history (van Breda 1992).

The Commission applauds HCFA's effort to introduce site-of-service differentials into the fee schedule. The differential described in the Final Rule is a substantial improvement over recent policy, but it can be improved.[33]

First, HCFA should attempt to develop service-specific estimates of practice expense differences by site. The Commission's research suggests that there is great variation across services in the resources required, implying that the site differential should vary by service. The use of a fixed 50 percent reduction may be appropriate for some services but may lead to inequities for others. Physicians will still have incentives to provide services that require, for example, expensive equipment or supplies in OPDs because the payment difference is too small for them to cover costs when providing the service in their offices. Conversely, they will shift services with extremely low actual practice expenses from OPDs to their offices, since the payment difference is larger than the costs incurred.[34] In both cases, if the site differences mirrored true expense differences more accurately, then physicians would be more able to make decisions on the basis of medical appropriateness rather than financial risk or reward. The Commission has noted the importance of HCFA's collecting detailed cost data about specific services, since they will support not only development of more appropriate site differentials but investigation of other important practice expense issues as well. HCFA recently contracted for a study to begin to collect these data.

Finally, the site-of-service adjustment would be more accurate if the differential were established by an increase in payment for office-based services and a decrease in payment for services provided in settings that receive Medicare facility payments. HCFA assigns a practice cost relative value to a service provided in the office by calculating average allowed charges for only services provided in that setting. This method, however, is inaccurate to the extent that allowed charges for many services provided in offices are themselves substantially affected by prior charges in non-office sites. Many of these services were provided predominantly in non-office settings two decades ago, and much of the pattern of relative charges from the early 1970s was locked in place once the Medicare Economic Index (MEI) was used to constrain the increase in prevailing charge screens. As a result, 1991 relative charges in office settings could reflect in large part relative charges in non-office settings.

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[33] Historically, carriers have had much discretion over site payment differences. Early last year HCFA released a list of 282 procedures for which carriers could reduce payment in non-office settings by 40 percent; application of this reduction has varied widely across carriers.

[34] Concerns about the medical appropriateness of office delivery of specific services should be addressed through an explicit prohibition on providing such services in physicians' offices.

Use of Average Allowed Charges

To this point, the discussion has addressed improving equity under the OBRA89 practice expense framework as administered under the Final Rule. Within that framework, however, only one of the three components — physician work — of the relative value scale is resource-based. Both the practice expense and malpractice expense components remain charge-based.

The Commission has long questioned the equity of the OBRA89 framework. It supports in principle basing the practice expense component on estimates of the resources required to provide individual services instead of historical charge levels, and it has developed and tested the feasibility of a resource-based approach. In Chapter 4 of this report, the Commission describes that work and an agenda for additional research that should precede congressional consideration of this policy change. It is also developing a more resource-based approach to malpractice expense that allocates payments according to the risk associated with providing a service (PPRC 1991a). Work on refining this method should be completed in 1992.

GEOGRAPHIC ADJUSTMENT UNDER THE FEE SCHEDULE

Fee schedule payments are adjusted by geographic adjustment factors within each payment area. This section describes some improvements to both the geographic adjustment factors and payment areas that could improve equity under the fee schedule.

Geographic Adjustment Factors

HCFA is using the best data currently available to calculate the three GAFs described in OBRA89. However, two elements of the GAFs and their construction should be improved. The first is the use of residential rent data as a proxy for commercial rents faced by physicians. The Commission has repeatedly called for the development of an index of commercial rents by the Department of Commerce or the Department of Housing and Urban Development.

The second issue, more technical in nature, addresses the calculation of GAF values for urban Medicare localities that include more than one county but not an entire metropolitan statistical area (MSA). In such cases, the GAF values reported in the Final Rule appear to reflect data from entire MSAs, ignoring the fact that some of the data used to calculate the GAF, such as wage data from the census, are available at the county level. Therefore, it is possible to reflect within-MSA price variation in MSAs composed of more than one locality. While this only affects a few localities (New York City, for example), it would improve the accuracy of the GAF relative to local price variation in these cases.

Payment Areas

As described by OBRA89 and the Final Rule, geographic adjustment under the fee schedule is made using 1991 Medicare localities, except for three states that have successfully petitioned to become statewide localities.[35] In its *Annual Report to Congress 1991* (PPRC 1991a), the Commission stated that the current Medicare localities are not the best basis for geographic adjustment of the fee schedule and proposed a policy under which most localities would be statewide. For a few states with high intrastate price variation, it recommended multiple localities based on MSA population categories. In making this recommendation, the Commission argued that its policy would allow accurate tracking of variation in prices, minimize differences at area boundaries, and encourage administrative and conceptual simplicity. HCFA's intentions appear consistent with this direction. But, except for honoring petitions to change to a statewide locality when both the winners and losers within a state support the change, it appears that HCFA intends to wait until the fee schedule transition is complete before making further changes in payment areas. The Commission urges HCFA to conduct the analysis needed to make systematic changes in payment areas.

THE FEE SCHEDULE CONVERSION FACTOR

In the NPRM, HCFA proposed an unexpectedly low conversion factor of $26.87, which according to its interpretation of OBRA89 was required to maintain budget neutrality. Various factors affected HCFA's calculation of the conversion factor, including its interpretation of how to adjust payments to maintain budget neutrality and its assumptions about physician responses to changes in payment rates. These factors combined to produce a 16.5 percent reduction in payments per service under full implementation of the fee schedule. The Commission's comments on the NPRM highlighted the reasons for the low conversion factor and recommended changes to restore the conversion factor to a level more consistent with congressional intent. In the Final Rule, HCFA made numerous adjustments resulting in a substantially higher conversion factor ($30.42, before applying the 1992 update factor). This conversion factor results in a 6.5 percent reduction in payments per service, which is lower than in the NPRM, but which the Commission continues to regard as excessive.[36] This section reviews the actions proposed in the NPRM, the Commission's comments, and the actions taken in the Final Rule.

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[35] The three are Minnesota, Nebraska, and Oklahoma.

[36] HCFA asserts that this reduction in payments per service is needed to offset anticipated increases in volume. It further projects that overall outlays will rise 12 percent per year, due to such factors as growth in patient population, annual payment updates, and its anticipated increases in volume.

Leveraging

The leveraging of all budget-neutrality adjustments added considerably to the size of the conversion factor cut proposed in the NPRM. HCFA interpreted a budget-neutrality clause in OBRA89 to require that all adjustments for budget neutrality be made using only the fee schedule conversion factor. Because the conversion factor affected only one-third of 1992 payments, this interpretation had the effect of leveraging all adjustments three-to-one: each percentage point reduction in 1992 outlays required a 3 percentage point reduction in the conversion factor.

In the NPRM, HCFA expressed dissatisfaction with this interpretation of the law but held that no alternative interpretation could be found. HCFA solicited alternative interpretations of the law that would avoid this leveraging of all adjustments.

The Commission proposed an alternative interpretation in its comments, suggesting that the budget-neutrality clause in OBRA89 be construed to require budget neutrality for the pure fee schedule, that is, for the 1996 rates, not the blended 1992 rates. This would avoid the problem of leveraging, at the cost of raising expenditures above the budget-neutral baseline during the transition years 1992 through 1995. The Commission suggested modifying the fee updates throughout the transition to maintain budget neutrality in all years.

In the Final Rule, HCFA improved upon the Commission's suggestions, completely eliminating the problem of leveraging while maintaining budget neutrality throughout the transition. HCFA set the conversion factor to make 1996 (pure fee schedule) fees budget-neutral. HCFA solved the problem of excess outlays during the transition years by reducing the adjusted historical payment basis (AHPB) rather than by the more difficult process of adjusting fee updates throughout the transition.

Asymmetry

Under the transition specified in OBRA89, 1992 fees for undervalued services increase more rapidly than fees for overvalued services fall. If left uncorrected, this asymmetry of the transition would result in outlays above the budget-neutral baseline from 1992 through 1995. In the NPRM, HCFA proposed offsetting the effects of the asymmetric transition by reducing the fee schedule conversion factor. This, combined with the leveraging noted above, would have resulted in a permanent reduction in fees of 6 percent by 1996.

In its comments on the NPRM, the Commission offered several alternatives to avoid much or all of this permanent fee reduction. In particular, the Commission recommended offsetting the effects of the asymmetry by reducing the AHPB rather than the fee schedule conversion factor. Because the AHPB is phased out over the course of the transition, adjustment via the AHPB would have no permanent effect on fees.

In the Final Rule, HCFA solved the problem of asymmetry along lines suggested by the Commission. The effect of the asymmetry was offset by reducing the AHPB rather than the fee schedule conversion factor. This established budget neutrality in 1992 while avoiding any reduction in the fee schedule.

Behavioral Offset

In the NPRM, HCFA assumed that physicians losing income under the fee schedule will offset half their losses with increased volume and that physicians gaining income will not reduce their volume of services. These assumptions led to a projected net increase in volume as a consequence of the introduction of the fee schedule. To maintain budget neutrality, HCFA proposed reducing 1992 fees an average of just over 3 percent. Leveraging, as noted above, increased this to a 10.5 percent cut in the fee schedule conversion factor.

In its comments on the NPRM, the Commission characterized HCFA's volume offset assumptions as a worst-case assumption. The Commission suggested that an average 1 percent fee reduction in 1992 would have been appropriate, and that the Volume Performance Standard (VPS) could provide adequate protection for any volume growth in excess of this 1 percent offset.

In the Final Rule, HCFA used identical assumptions concerning behavioral response to fee changes but applied them in a manner to avoid the leveraging effect. Thus, a baseline adjustment of 6.5 percent was subtracted from the conversion factor. While eliminating the leveraging of the assumptions is helpful, the Commission still considers the assumptions themselves to be extreme.

Baseline Issues

In addition to these issues related to the transition, HCFA had to make numerous assumptions to calculate the baseline or pretransition value for the conversion factor. For some of the more important assumptions, HCFA's proposals in the NPRM, the Commission's comments, and action by HCFA in the Final Rule are summarized below.

Visit Crosswalk. Because a new set of codes for EM services was introduced in 1992, calculation of a budget-neutral conversion factor required some method to crosswalk bills from the old EM codes to the new EM codes in order to estimate total EM billings under the new codes.

The Commission noted that the conversion factor was sensitive to assumptions regarding the crosswalk. It illustrated this point using data from log diary surveys of physicians. If coding were based on estimated times from those surveys, the Commission projected outlays for visits 13 percent lower (and thus a conversion factor 5 percent higher) than under HCFA's visit crosswalk assumption. This result highlighted the uncertainty of the crosswalk assumptions.

HCFA did not modify the visit crosswalk for the final rule, except where the CPT panel modified the final codes to be used. HCFA argued, based on its analysis of four surveys in which encounter time was gathered, that encounter time seemed an unreliable indicator of how physicians will bill for visit services.

Definition of Global Services. The standardization of the global surgical service package across carriers added some uncertainty to the calculation of the conversion factor. In particular, if the number of presurgical and postsurgical visits included in the package were to increase after 1992, this would result in fewer visit bills and hence would allow the overall conversion factor to be increased. In its comments on the NPRM, the Commission asked that HCFA make explicit its estimate of the impact of the change in global surgery policy on the fee schedule conversion factor. The possibility of an impact of changes in this policy was acknowledged in the Final Rule, but no specific information was supplied regarding the magnitude of the adjustment.

Bills Paid at the Billed Charge. In the NPRM, HCFA calculated a budget-neutral conversion factor assuming that all bills would be submitted at or above the fee schedule. The Commission noted that this was the most pessimistic assumption possible and that the budget-neutral conversion factor could be raised slightly to the extent that some bills would be submitted below the fee schedule amount.

In the Final Rule, HCFA made some modifications in this assumption. It assumed that physicians whose 1991 submitted charge would have been below the fee schedule would have raised their submitted charge halfway to the fee schedule in 1992 and 90 percent of the way toward the fee schedule by 1996. This latter assumption is the one that matters for calculation of the conversion factor, since the conversion factor is based on the pure (1996) fee schedule. Thus, HCFA's assumptions changed only marginally regarding the presence of bills paid at the billed charge: rather than assuming 100 percent of such bills would disappear, HCFA assumed that only 90 percent would. This probably had only a very minor impact on the conversion factor.

Trimming. In developing estimates for the NPRM, HCFA discarded certain records from its primary data source, the BMAD procedure file, as outliers. These records had average charges more than two standard deviations away from the mean average charge. The Commission commented that HCFA's approach tended to discard more of the records with the highest charges, thus lowering the apparent average charge after trimming. Commission simulations suggested that data trimming may have reduced the conversion factor by as much as 2 percent.

In the Final Rule, HCFA adopted an alternative strategy of removing only the most egregious outliers: those with mean allowed charges under one-third or more than three times the mean allowed charge. This new data trimming methodology raised the conversion factor by 0.5 percent.

Bills Paid Below the Fee Schedule. Certain bills must be paid below the full fee schedule amount. These include bills with payment modifiers, bills to nonparticipating physicians, and bills to new physicians. In the case of modifiers, carrier-specific policies were to be replaced with a uniform national policy in 1992. The Commission suggested that HCFA's adjustments for these factors be made explicit.

In the Final Rule, HCFA notes that the new physician payment rules were factored into the calculation of the conversion factor, but offers no estimate of the impact on the conversion factor. No estimates were offered for the standardization of payment modifiers or for possible changes in the proportion of claims submitted by nonparticipating physicians. In both cases, the Commission believes that the potential impact on the conversion factor was quite small, well under 1 percent.

Aging of Data for Faster Procedure Growth. In the NPRM, HCFA proposed to account for the faster growth of procedures rather than EM services in calculating the conversion factor. The Commission's comments supported this idea. In the Final Rule, an assumption of slower growth in EM services than in procedures led to a 1 percent increase in the conversion factor.

The Initial Conversion Factor and the Volume Performance Standard

From the above discussion, it should be clear that there is some room for error in the calculation of the initial (1992) conversion factor. The response of volume to the substantial and systemwide changes in fees is impossible to predict accurately, since such a change has never before been undertaken by Medicare. The overhaul of visit coding and the global surgery policy add uncertainty to any prediction of outlays, inasmuch as these are substantive changes affecting more than 70 percent of Medicare-billed services. Clearly, some error in projecting outlays is unavoidable.

The VPS, however, may act to offset errors made in setting the initial conversion factor. When calculating the 1992 VPS defaults, HCFA actuaries must assume that the conversion factor has been established in a budget-neutral fashion. If the conversion factor is in fact too low, then outlays will correspondingly be too low. In particular, outlays will be lower relative to the VPS target, which should result in a higher fee update in 1994. Similarly, an initial conversion factor that is too high will result in a reduced 1994 fee update. In either case, revenues will diverge from the budget-neutral level only for the intervening two years.

Two caveats must also be included here, however. First, OBRA89 specifies that the 1994 default update can be set no lower than 2.5 percentage points below the MEI, regardless of past expenditure growth. Thus, if the conversion factor is substantially higher than it should be, the excess outlays may not be recovered through the VPS defaults. Second, the default formula includes a five-year average of past volume growth. To the extent that volume growth swells in response to the fee schedule, this will eventually raise the VPS baseline in the default formula. Thus, even if HCFA's volume offset assumptions are completely correct, the volume growth produced by the implementation of the fee schedule may still have a long-run impact on outlays via raising the default VPS rate of growth.

The Congress, of course, may choose in future years to ignore the default update formula and to set a lower conversion factor should volume grow much more quickly than anticipated. It could also choose to modify the OBRA89 default formula. As part of its ongoing work on the VPS and its future recommendations to the Congress in this area, the Commission plans to monitor the effects of these factors.

FEE SCHEDULE CHANGES REQUIRING LEGISLATIVE ACTION

The Commission has identified a number of refinements in the Medicare Fee Schedule that would require legislative action. Issues involving practice expenses are described elsewhere in this chapter and in Chapter 4. Several others have been identified in prior Commission reports and are restated in this section. The Commission reiterates its support, stated previously, for these legislative changes in the Medicare Fee Schedule. Finally, the Commission takes up a new issue raised by a number of organizations: whether the fee schedule should incorporate compensation for the expenses of medical education, biomedical research, and uncompensated care, as they apply to the provision of medical services.

Payment for Electrocardiograms

In OBRA90, the Congress determined that Medicare should no longer pay separately for interpretation of EKGs when performed in conjunction with a physician visit. To implement this provision, HCFA has increased the payment for some evaluation and management services to compensate physicians for the work involved in interpretation. Specifically, total RVs for visits were modified to include an add-on for EKGs of 0.024 RVUs for office and emergency department visits, 0.036 RVUs for hospital and critical care visits, and 0.003 RVUs for nursing facility and home visits.[37]

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[37] These values — which are divided into RVUs for work, practice expense, and malpractice expense — differ from those listed in the Final Rule, which the Commission has been advised by HCFA were in error. The add-on amounts are different from those published in the NPRM.

Since most EKGs are done by a few specialties, the Commission believes this approach to be inequitable. It therefore recommends that the Congress modify OBRA90 so that EKGs are paid separately from visits at the final resource-based price for both the professional and technical components. This change would likely be funded by removing the add-ons from the RVs for visits.

Payment to Nonphysician Practitioners

In its *Annual Report to Congress 1991* (PPRC 1991a), the Commission made several recommendations concerning payment to nonphysician practitioners (NPPs). These included:

- NPPs who bill Medicare on a fee-for-service basis should continue to have payments that differ from those of physicians. Current percentage differentials, however, should be replaced with differentials that reflect differences in physicians' and nonphysicians' resource costs: work, practice expense, and malpractice expense. The value of the work component should be adjusted to reflect differences in investments in education and training between each NPP category and physicians. The components for practice expense and malpractice expense should also be adjusted to reflect any difference in resource costs.

- All services provided by NPPs should be identified, by specific category, on claim forms by adding modifiers to the existing CPT codes.

- When physicians bill for EM services their NPP employees provide, these services should be paid at the NPP level, rather than at the physician level. This would account for the fact that little or no physician work is involved in delivering the service.

HCFA made no policy changes in the Final Rule. For the first of these three recommendations, legislative action would be required. Although NPPs benefit as the fees are increased for many of the services on which the differentials are determined, the Commission reiterates its belief that payments based on resource costs would significantly improve the present arbitrary and inequitable system of paying NPPs. For the latter two recommendations, change could be accomplished by regulatory decision.

The Commission has also addressed payment for services for which the typical provider is an NPP. In its comments on the NPRM, the Commission recommended that the development of RVs be based on estimates of work provided by the primary providers of care — for example, psychological testing (90830), provided primarily by clinical psychologists. In estimating the RV for this service, HCFA determined it to be a technical service not requiring physician work.[38] This determination has not been made uniformly across all diagnostic services for which the primary provider and interpreter of the results is an NPP with direct billing privileges under Medicare. The Commission continues to support the concept that all relative values should reflect estimates of resource costs.

Payment to New Physicians

Under the Medicare Fee Schedule, new physicians will continue to be paid less than their colleagues already in practice. Specifically, new physicians will be paid at 80 percent of the fee schedule amount in their first year of practice, 85 percent in their second year, 90 percent in their third year, and 95 percent in their fourth year. The Commission has long stood by the principle that physicians should be paid the same when providing the same service. Rules that pay new physicians a discounted fee clearly violate this principle, and the Commission has consistently advised against their adoption. The Commission recommends that the Congress eliminate differential payment for new physicians and fund this policy change by adjusting the conversion factor.

Payment to Assistants-at-Surgery

Under OBRA90, the Congress reduced the Medicare payment to physicians who serve as assistants-at-surgery from 20 percent of the principal surgeon's payment to 16 percent. Results from the Hsiao study, however, suggest that the 16 percent rate is lower than estimates of the resource costs. When combined with reductions in payments for surgical procedures, the 16 percent rule may make it difficult for surgeons to recruit assistants. The Commission recommends basing payments to assistants-at-surgery on resource costs. Until resource-based relative values are developed for more procedures, it would be appropriate to return payments to assistants-at-surgery to 20 percent of the surgical payment under the Medicare Fee Schedule.

Paying for the Costs of Teaching, Research, and Uncompensated Care

One concern that has been raised by a number of groups, including multispecialty referral centers and teaching hospitals, is that the costs for treating patients in such settings are higher than in other provider settings because of the added expense of providing medical education and research. They argue that the efforts of physicians working in clinical settings with residents or dealing with research protocols increase both the time and intensity of the average patient encounter.

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[38] Because it considered psychological testing to be a technical service, HCFA dispersed 100 percent of the allowed charge under practice expense and malpractice expense. The effect of geographic adjustment on the payment for this service differs because the GAF for physician work is not applied.

Similar arguments are made about the costs of uncompensated care. Such costs are incurred not only by many of the larger referral centers and teaching institutions, but also by any physician who serves uninsured patients. Although all physicians are likely to provide some uncompensated care, those seeing a disproportionate share of uninsured or underinsured patients may bear a significant financial burden.

In the past many providers were able to include such expenses in their charges. Under the system of paying on prevailing charges, Medicare paid at a rate for many services that probably allowed physicians to shift at least some portion of those expenses. When prospective payment for hospitals was developed, the Congress explicitly authorized separate compensation for medical education, paying for the direct costs of medical education on a reasonable cost basis. Additional payments are made to hospitals under the prospective payment system for the indirect costs attributable to medical education (factors such as costs associated with the teaching of residents) and for those hospitals that serve a disproportionate share of low-income patients. No specific provision, however, is allowed under Medicare hospital payment for costs associated with research.

Although some would contend that activities such as teaching and research should be not be funded through payments for patient care, others maintain that — since other sources of funding are increasingly inadequate — the patient care dollar is the best available mechanism. For teaching, this could take the form of a medical education adjustment or modifier (perhaps similar to the PPS indirect medical education adjustment). In parallel form, a research adjustment could be created to cover those procedures where considerably more work was performed as part of a research protocol. Finally, an adjuster or modifier for uncompensated care could take the form of a payment bonus for those physicians or practices that provide a disproportionate share of care to uninsured or Medicaid patients (parallel to the PPS disproportionate-share adjustment).

A key issue in investigating the feasibility of such adjusters would be the need to define carefully the circumstances under which they would be applied. Determining which physicians qualify as providers of medical education or research or as disproportionate-share providers is potentially difficult both as a methodological issue and as a political consideration. In addition, similar adjustments made in the Medicare hospital payment system are not universally regarded as good mechanisms for compensating hospitals for these costs. Furthermore, the amounts of resources devoted to these activities are likely to be far more difficult to measure for Part B providers, especially for individual physicians.

Adjustments for the costs of medical education, research, or uncompensated care might create a mechanism to remove unwanted incentives and reward those providers who are most involved in these activities. In the end, however, the broader concern is whether the Medicare Fee Schedule is the best mechanism for compensating physicians for teaching and research activities or for uncompensated care, or whether direct funding mechanisms are more appropriate. While not ruling out the possibility of using the fee schedule as a vehicle for compensating physicians in these ways, the Commission believes that it is premature to complicate the fee schedule with additional adjustments. The overall process of refining the fee schedule should be a priority at this time.

BROADENING THE APPLICABILITY OF THE FEE SCHEDULE BEYOND MEDICARE

Private insurers and state Medicaid programs have launched significant initiatives to revise their methods of physician payment to incorporate elements of the Medicare Fee Schedule. The decisions made by some of these organizations in their initiatives illustrate the issues that will arise as broader application of the principles underlying the Medicare Fee Schedule is contemplated.[39]

Many Blue Cross and Blue Shield plans have already begun to reform their method of physician payment in response to Medicare's relative value scale. Many differentiate between overvalued and undervalued services in their annual updates, and others are planning more extensive changes for 1993 or 1994. A few plans will use the Medicare relative value scale and their own conversion factor as an additional screen in their reasonable charge systems. Reductions in payments for procedures will be used to raise payments for evaluation and management services. A few others are contemplating substituting such a screen for their prevailing charge screens and making a transition over a period of three to five years from a system based on reasonable charges to a fee schedule. These plans expect to depart from Medicare relative values in order to maintain adequate participation rates throughout their markets. Some relative values will be adjusted in situations where payment policies for particular plans differ from Medicare's.

State Medicaid programs are also moving actively to incorporate the Medicare relative value scale. Since most already use fee schedules rather than reasonable charge systems, adoption is rather easy. Programs in Maine and Michigan have already revised their fee schedules to incorporate resource-based relative values, and the program in Texas is scheduled to do so in April of this year. The state of Washington is considering plans to implement a resource-based fee schedule for its Medicaid, state employee health insurance, and workers compensation programs starting in 1993. Medicaid programs in at least 12 other states are actively considering such revisions in their fee schedules.

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[39] A more detailed discussion of the issues involved in broadening the applicability of the fee schedule is found in a report prepared by the Commission in response to a request by Representative Dan Rostenkowski, chairman of the House Committee on Ways and Means (PPRC 1992). This report includes discussions both of administrative issues in applying Medicare rates to private payers and of the impact of national payment limits on physicians and other professionals.

Successful application of the Medicare relative value scale to populations of nonelderly adults and children will require some modifications. Fortunately, the resource-based relative value scale was developed to apply to physicians' services used by a general population. In the Hsiao study, the vignettes that were rated for physician work covered the entire population, rather than only an elderly one. For this reason, the relative work values will, in most cases, apply without modification to a privately insured population or to Medicaid recipients.

As discussed previously, the orientation of the Hsiao study toward a general population has in fact presented some problems in development of the Medicare Fee Schedule and has led the Commission to call for a Medicare adjuster. Nevertheless, relative values for obstetrical services and services for children need attention if the Medicare relative value scale is to be applied equitably by other payers. In addition, certain services not covered by Medicare (e.g., preventive services) will need relative values assigned.

Obstetrical Services

The Medicare program pays for a small number of deliveries each year by women who are eligible for Medicare because they either receive disability insurance payments or have end-stage renal disease. The Hsiao study provided estimates of relative work for both vaginal and cesarean deliveries. But some have argued that relative values for deliveries in the Medicare Fee Schedule may be too low, in part because the Hsiao survey referred specifically to uncomplicated deliveries.[40]

Practice expense and malpractice expense relative values, which are based on Medicare allowed charges, also appear to be distorted. In 1989, allowed charges for all surgical procedures averaged 70 percent of submitted charges. Allowed charges for vaginal deliveries and cesarean deliveries, however, were only 49 percent and 59 percent of submitted charges, respectively. This difference may reflect the interaction of rapid increases in fees by obstetricians in response to rising malpractice premiums and constraints imposed by the MEI on increases in Medicare prevailing charges from 1973 levels. If Medicare charges for obstetrical services relative to charges for other surgical services paralleled the relationship in the private sector, practice expense relative values under the Medicare Fee Schedule would be 43 percent higher for vaginal deliveries and 19 percent higher for cesarean deliveries.

Medicare's use of historical charges also appears to undervalue malpractice expense relative values for obstetrical services. These RVs are distorted further, because they are based on survey data on the percentage of revenues going to malpractice premiums for obstetrician-gynecologists and family physicians (specialty weights based on proportions of Medicare deliveries). In effect, this spreads malpractice costs evenly over all services provided by physicians in these specialties. But obstetrical services account for disproportionate amounts of malpractice premiums for these specialties. A risk-adjusted approach to relative values, such as the one on which the Commission has been working, would raise malpractice expense relative values for these services and lower them for other services provided by these specialties.

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[40] The relative work values were increased by HCFA on the advice of its CMDs.

The problems in applying Medicare relative values for obstetrical services have been noted by Medicaid programs. Maine, Michigan, and Texas found that payments for deliveries under the Medicare relative value scale would have led to a reduction in obstetrical payments from current levels. Each state decided to depart from the Medicare relative values for these services in order to maintain or raise current payments.

These policy decisions reflect either a recognition of the various technical problems with the Medicare relative values or an attempt to incorporate information on access to care into the setting of payment rates. Many Medicaid programs have recently raised payments for obstetrical services to make them more accessible. Although it would be a challenging analytical task, adjusting relative values on the basis of relative access measures could play a role in Medicare in the future. (See Chapter 3 for a discussion of the Commission's plans to monitor access to care by Medicare beneficiaries.) Medicaid programs have already begun to pioneer this area.

Services for Children

Some of the Medicare relative values will likely need to be adjusted when applied to services delivered to children. For procedures, at least three factors contribute to differences in work. First, CPT codes may not distinguish a procedure performed on a child for a particular indication from an essentially different procedure performed on an adult for the same problem.[41] For example, surgical treatment of a bimalleolar ankle fracture in growing children may require a different type of internal fixation, with different needs for postoperative monitoring and different potential complications. Nevertheless, it is combined with other surgical treatments of bimalleolar ankle fractures on adults in a single CPT code.

Second, the work involved in performing a number of procedures on a young child is substantially higher than that for the adult patients usually described in the vignettes in the Hsiao study. The anatomic and physiological differences between children and adults often pose greater technical difficulty for the physician and make the procedure riskier. For example, a percutaneous renal biopsy of a child is more difficult simply because the target kidney is smaller.

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[41] There are only a few codes in the CPT (e.g., tonsillectomy) for which separate codes are provided based on the age of the patient.

Finally, children may be less cooperative as patients. For example, children often have difficulty obeying the instructions required to perform spirometry. Consequently, the test must often be repeated many times, necessitating more work on the physician's part.

On the other hand, physician work may be less for some services for children. Recovery from major surgery, for example, is often faster in children and requires fewer postoperative visits.

Evaluation and management services, which make up at least 50 percent of Medicaid pediatric expenditures, raise at least two issues. First, preventive services such as well-baby visits are not covered under Medicare and consequently have no RVs. Well-baby visits, however, were surveyed by Hsiao and do have Hsiao work values. Second, EM services provided to certain children may require more work than the same EM services furnished to adults. An intermediate office visit involving an infant, for instance, may entail more parental counseling and more telephone support — both before and afterwards — than an intermediate visit involving an adult. EM services to children were, however, surveyed in the Hsiao study, thereby creating a potential basis for setting relative values.

As in the case of obstetric services, Medicaid programs incorporating Medicare relative values have decided to forgo some reductions in payments for pediatric services that would have occurred if the relative value scale were adopted without any changes. A combination of state officials' awareness of some of the technical problems and their explicit incorporation of judgments on assuring access were factors in these decisions.

Developing pediatric adjusters may be a more extensive task than developing a Medicare adjuster. Differences in work between children and adults may be larger than those between elderly and nonelderly adults. Application of a uniform percentage adjuster to a range of services (as opposed to adjusters specific to each service code) may be less appropriate for children than for the elderly population.

Developing pediatric adjusters will require efforts on the part of HCFA or another entity. It is not clear at this time whether this will require additional research using techniques of magnitude estimation or whether an expanded refinement process involving representatives of pediatrics along with the CMDs and other specialties would be more effective. However, given the speed with which some Medicaid programs and private insurers are acting to incorporate relative values, it might be best to start with the expanded refinement process. Thereafter, research on questions that prove most difficult to resolve could be initiated.

Basing practice expense and malpractice expense relative values on historical charges also contributes to inaccuracies in relative values for pediatric services. These components of the relative value scale reflect both historical charges and ratios of practice expenses to total revenues of specialties that provide these services to the Medicare population. To the degree that pediatricians have different ratios (or historical charges), the omission of pediatricians from the Medicare calculations will make the practice expense and malpractice expense components less accurate for them than for the physicians who treat Medicare patients.

The federal government should play a leadership role in developing the changes that are required to make the Medicare relative value scale applicable to populations covered by private insurers and Medicaid programs. It would waste resources and confuse physicians if numerous programs using resource-based relative values each hired their own consultants and developed their own parameters.

Given the needs of Medicaid programs, HCFA would be an appropriate entity to conduct the analysis needed to develop these parameters. As private insurers increase their use of Medicare relative values, consideration should be given to incorporating their representatives into the process of refining the relative value scale. The private insurer role would be relevant both for these adjusters and for setting relative values for services in which physician work for nonelderly adults and children does not differ from that for elderly patients.

A PROCESS FOR IMPROVING THE ACCURACY AND APPLICABILITY OF THE RVS

As the Medicare Fee Schedule moves through an implementation phase between now and 1996, many changes are likely to be made. Just as substantial changes, both in broad payment policies and in specific relative values assigned to individual codes, were made between the NPRM and the Final Rule, more changes are certain to be made as new Final Rules are published each year. If perceived as open and fair by the broader physician and beneficiary community, the refinement process will be an important factor in gaining acceptance and credibility for the fee schedule, as well as a key element in the willingness of other payers to adopt the fee schedule approach.

In making the changes reflected in the Final Rule, HCFA kept some of its decisionmaking processes to itself, while spelling out considerable detail in other areas. In the central area of assigning and revising the relative values for different codes, HCFA relied heavily on a panel of carrier medical directors. It is unclear, however, whether that process provides a mechanism for addressing certain systematic issues, such as compression or the Medicare adjuster, or whether the CMDs will be asked to evaluate the RVs for EM services.

HCFA indicates in the Final Rule that it expects an ongoing refinement process, because of the need both to establish RVs for codes that are added or revised by the CPT each year and to revise RVs for existing codes. It indicates further that it will consider recommendations from a variety of sources, accepting input from the relative value update panel established by the AMA as well as from medical specialty societies and other groups. In particular, HCFA notes a potential role for a consensus process used by specialty societies or other physician groups, particularly where that process reviews those services under the aegis of a particular specialty and does not deal with interspecialty scaling issues. HCFA indicates a particular interest in "adjustments to the RVUs for procedures within a specialty that keep the total RVU 'pool' constant for these procedures" (*Federal Register* 1991b). This consensus approach resembles, to some extent, what the Commission envisioned for the final step of the refinement process. The Commission urges HCFA to keep the lines of communication open with the physician community as it revises and conducts its refinement processes to ensure that they are viewed with credibility.

As appropriate mechanisms are sought for refining the Medicare Fee Schedule and making the fee schedule applicable for other payers serving broader populations, the Commission believes that it is important to take into account several principles:

- the relevance of this effort to a wide spectrum of payers, practitioners, and consumers;
- the fact that some requirements are common to many payers whereas others are specific to individual payers;
- the work and costs involved in accomplishing refinements; and
- the desire for standardization across payers.

The process of refining the fee schedule is certainly not easy. Nor is it easy to define what results are acceptable. Over the next few years, it is critical that policymakers — including both HCFA and the Congress — give considerable thought about how to make sure that the fee schedule continues to evolve in a direction that will assure equitable payment.

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CHAPTER 3

ENSURING FINANCIAL PROTECTION AND ACCESS TO CARE FOR BENEFICIARIES

In the months since the Medicare Fee Schedule became the basis for physician payment, much attention has been focused on the impact of changes in fees on physicians. But the Congress has also long recognized that Medicare beneficiaries have an important stake in payment reform and mandated that both the Health Care Financing Administration (HCFA) and the Commission direct their attention to protecting beneficiaries' financial position and access to care. Since its first meeting in 1986, the Commission has devoted considerable thought to ensuring that physician payment policies are designed and implemented to safeguard access to care and to protect beneficiaries from significant financial hardship.

This chapter reflects the Commission's response to congressional concern about these issues now that implementation of payment reform is well under way. It begins by presenting new simulation results that describe the impact of the new payment system on beneficiaries' financial liability. The second section considers the effectiveness of the limiting charge provisions of the Omnibus Budget Reconciliation Act of 1989 (OBRA89) in limiting beneficiary liability. The Commission makes several recommendations to ensure that balance billing limits provide the type of protection that was expected from the legislation.

The chapter concludes by describing progress in implementing the Commission's work plan on monitoring access. A full analysis of baseline data from 1986 through 1990 will be submitted to the Congress on May 15, along with comments on the Secretary of Health and Human Services' annual report on access. At that time, the Commission will also comment on the Secretary's first annual report monitoring the charges of nonparticipating physicians, the proportion of expenditures taken on assignment, and the extent of balance billing.

RECOMMENDATIONS

Congress should amend the Medicare statute to clarify that beneficiaries should not be held liable for charges on unassigned claims that exceed the limiting charge.

Congress should amend the Medicare statute to require physicians to make refunds to beneficiaries for charges on unassigned claims that exceed the limiting charge.

The Commission enthusiastically supports the plan of the Health Care Financing Administration to include the charge limit on the Explanation of Medicare Benefits form in 1993 as an important step to empower beneficiaries and enhance their understanding of the policy.

HCFA and the carriers should be instructed to disseminate information about the limiting charge policy to beneficiaries and physicians through a variety of channels. In particular, the limiting charge should be clearly explained in the *Medicare Handbook;* this publication or comparable information on program changes should be distributed to all Medicare beneficiaries. Congress should provide adequate funding to support this educational effort.

While enforcement of balance billing limits is clearly the legal responsibility of the Medicare program, organizations representing physicians and beneficiaries should also take steps, working in close cooperation with HCFA and its carriers, to educate their members about Medicare rules and regulations.

Effective monitoring of charges on unassigned claims is critical to ensuring financial protection of beneficiaries. Carriers should be required to monitor compliance by conducting prepayment screening of all unassigned claims to identify potential violations of the limiting charge.

HCFA should be directed to explore the feasibility of notifying physicians of all potential violations of the limiting charge with a document similar to the Explanation of Medicare Benefits form received by beneficiaries. Improved communication between carriers and physicians could lead to fewer honest mistakes and assist in establishing the case for sanctioning those who violate the limit on a repeated basis.

Distinct delineation of authority within the Department of Health and Human Services for enforcing the limiting charge is essential to protecting beneficiaries. This authority should be clearly delegated by the Secretary to the appropriate agency.

IMPACT OF THE MEDICARE FEE SCHEDULE ON BENEFICIARIES

The Medicare Fee Schedule was designed to improve financial protection for beneficiaries. Changes in the amounts beneficiaries will spend out of pocket will be affected by changes in fees for different services, charge limits specified in payment reform legislation, and changes in physician billing practices.

Previous simulations conducted by the Commission and others indicated there would be decreases in balance bills and no change in coinsurance (PPRC 1989; Mitchell and Menke 1990). The simulations reported in this chapter indicate that beneficiaries' liabilities for balance bills may decline significantly, and liabilities for coinsurance will be slightly lower than they were previously.

Estimates of the impact of the fee schedule on beneficiaries, especially that due to the charge limit, are sensitive to assumptions about physicians' responses to the fee schedule. As with previous simulations of the fee schedule's impact on beneficiaries, this one assumes that physicians will change neither their participation decisions nor their balance bills. Given the recent experience with the participating physician program, these simulations probably underestimate participation rates and, therefore, understate savings due to the charge limit. After the implementation of the more stringent charge limits beginning in 1991, the overall physician participation rate grew by about 5 percentage points over the previous participation period. Even those specialties that provide services that were subject to cuts under OBRA90 had increased participation rates (see Chapter 1, Table 1-4). Physician participation rates increased by a comparable amount in 1992.

Impact on Beneficiaries

The combination of the Medicare Fee Schedule and the charge limits is projected to reduce beneficiaries' out-of-pocket costs. The impact of the coinsurance change will be small and vary somewhat across categories of beneficiaries. The limits on charges may significantly reduce beneficiary liability for balance bills with little variation across beneficiary categories.[1]

Changes in Coinsurance. For beneficiaries in the aggregate, total coinsurance payments will decline by 6.5 percent due to the reduction in payments to physicians (Table 3-1). The degree of change in coinsurance will vary across types of beneficiaries, depending on the location and mix of services received. Because payments will rise in rural areas and decline in urban areas, there will be an 11 percent decrease in coinsurance for beneficiaries living in urban areas, while there will be a 3 percent increase for beneficiaries living in rural areas.[2] The impact on those beneficiaries receiving primarily evaluation and management (EM) services that are slated to have increased payments will differ from those receiving surgical global services for which payments will decrease. This is shown, for example, by comparing beneficiaries who are not hospitalized and whose coinsurance payments will increase with those who are hospitalized and who will have reduced coinsurance payments.

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[1] These simulations are based on 221,380 beneficiaries that were randomly selected from the 1988 beneficiary file of the Part B Medicare Annual Data file.

[2] Changes for geographic areas described above differ from those reported in Chapter 2 because these are reported by the location of beneficiaries' residences and those in Chapter 2 are reported by physicians' practice locations.

Table 3-1. Change in Beneficiaries' Liabilities for Coinsurance

Beneficiary Category	Percent Change
All	-7
Sex	
Male	-9
Female	-4
Race	
Black	-6
Other	-7
Age	
65 - 74	-8
75 - 84	-7
85 +	-1
Area	
Metropolitan >3 million	-11
Metropolitan 1-3 million	-10
Metropolitan <1 million	-6
Rural >25,000	-2
Rural <25,000	3
Hospitalized	
Yes	-10
No	7

Source: PPRC simulations using 1989 BMAD IV 1992. Geographic areas are assigned based on beneficiaries' residences.

Changes in Balance Bills. The charge limit is expected to reduce total liabilities for balance bills. If physicians do not change their assignment status and submitted charges, balance bills will be reduced by 74 percent (Table 3-2).[3]

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[3] The percentage change in balance bills will be slightly higher than shown because these estimates do not include reductions in balance bills for anesthesia services, which historically have had higher balance bills than those for other services.

Table 3-2. Change in Beneficiaries' Liabilities for Balance Bills

Beneficiary Category	Percent Change
All	-74
Sex	
Male	-74
Female	-75
Race	
Black	-78
Other	-74
Age	
65 - 74	-74
75 - 84	-74
85 +	-75
Beneficiary Residence	
Metropolitan >3 million	-74
Metropolitan 1-3 million	-74
Metropolitan <1 million	-74
Rural >25,000	-74
Rural <25,000	-76
Hospitalized	
Yes	-75
No	-73

Source: PPRC simulations using 1988 BMAD IV 1992. Geographic areas are assigned based on beneficiaries' residences.

Previous simulations showed that the percentage change across all categories of beneficiaries would be fairly uniform (PPRC 1991; Mitchell and Menke 1990). The results shown here are similar to those presented in previous simulations with the percentage decrease in balance bills fairly uniform across all beneficiary categories (Table 3-2).

If physicians do not change their assignment status and submitted charges, fewer beneficiaries will have large expenditures for balance bills than previously. In 1988 about 2 percent of beneficiaries had total annual balance bills in excess of $500, while under the fee schedule almost no beneficiaries are likely to have total annual balance bills of more than $500.

ENFORCEMENT OF THE LIMITING CHARGE

Under OBRA89, the limits placed on the amount physicians may charge Medicare beneficiaries above the program's recognized payment amount were simplified and linked to the new Medicare Fee Schedule. These limits went into effect on January 1, 1991, and will be fully phased in as of January 1, 1993. After reviewing the limiting charge provisions of OBRA89, this section considers the adequacy of these limits in providing financial protection to beneficiaries. Recommendations are presented to ensure that the law as written and as implemented provides meaningful protection.

Current Law

In its 1989 *Annual Report to Congress*, the Commission recommended that charges for unassigned claims be limited to a fixed percentage above the Medicare Fee Schedule amount. This recommendation reflected a view that the market for physicians' services does not function well enough to preclude the need for financial protection for beneficiaries. The Commission saw these limits as an appropriate mechanism to protect beneficiaries from additional cost sharing burdens and to maintain access to care.

The Congress enacted charge limits in OBRA89 that are based on a fixed percentage above the Medicare Fee Schedule amount. As enacted, however, the limiting charge is somewhat more complicated because it retains elements of the previous system of maximum allowable actual charges (MAACs) in calculation of charge limits for 1991 and 1992.[4] Specifically, OBRA89 limits charges on unassigned to:

- in 1991, 125 percent of the recognized payment amount for nonparticipating physicians or the physician's 1990 MAAC, whichever was lower;[5]
- in 1992, 120 percent of the recognized payment amount for nonparticipating physicians or the 1991 limiting charge, whichever is lower; and
- in 1993 and thereafter, 115 percent of the recognized payment amount for nonparticipating physicians.[6]

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[4] Created under OBRA86, MAACs limited balance billing by physicians based on their historical charges. Thus, MAAC limits differed from physician to physician, as well as among the individual procedures billed by an individual physician.

[5] This provision was amended in OBRA90 to raise the balance billing limit for EM services to 140 percent in 1991 for one year only. This change reflected a concern that it was inequitable to physicians who provide primarily EM services to impose such stringent balance billing limits before the fee increases anticipated under the Medicare Fee Schedule went into effect.

[6] Because nonparticipating physicians will be paid only 95 percent of the fee schedule amount, the effective charge limit in 1993 will be 109.25 percent of the amount paid to a participating physician.

Mechanisms for monitoring and enforcing the OBRA89 charge limits are the same as those used previously under the MAAC system. The Medicare carrier manual directs carriers to monitor a sample of assigned and unassigned claims for all nonparticipating physicians. This sample must include the 10 most frequently performed procedures in the physician's specialty plus an additional 15 procedures selected at random. Physicians with violations of the charge limit exceeding $300 are to be notified by letter.[7] After this notification, carriers are required to monitor the physician intensively for three months. If violations persist, a second letter is sent and the case is referred to the Office of the Inspector General (OIG). Carriers may also initiate reviews in response to beneficiary complaints.

The OIG may impose sanctions against a physician who has "knowingly and willfully" billed in excess of the limiting charge on a repeated basis. These sanctions include double the excess charges, civil money penalties (up to $2,000 per violation) and/or exclusion from the program for a period of up to five years. Sole community physicians and physicians who are the only source of an essential specialty, however, cannot be excluded from the program.

Effectiveness of Charge Limits

Although it has been more than a year since the new limiting charge provisions went into effect, it is difficult to say whether they have been effective in providing financial protection to beneficiaries. Few, if any, cases have been reported by HCFA's regional offices to the OIG. This could be considered as evidence that physicians have been attentive to the new limits and have been billing appropriately. On the other hand, beneficiary advocates report that there have been problems, some serious enough to warrant legal action.[8] The fact that few potential violations have been investigated raises the possibility that the limits have not been adequately enforced. In either case, the Commission has concerns whether the law either as written or as it has been implemented can provide meaningful protection to beneficiaries.

The effectiveness of balance billing limits in providing such protection depends upon four factors:

- action by HCFA and the carriers to inform physicians and beneficiaries of the law and regulations, and clear understanding of those policies by physicians and beneficiaries;

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[7] The $300 threshold can be reached on a single claim or by adding smaller violations from several claims.

[8] In January, a class action suit was filed in the Sacramento, California U.S. District Court seeking changes in HCFA's interpretation of the statute. Each of the three Medicare beneficiaries named in the suit had balance bills exceeding the charge limit by several hundred dollars or more.

- systematic monitoring to ensure compliance and to detect potential noncompliance;

- the ability of the Medicare program to impose penalties consistent with the nature and degree of noncompliance; and

- a mechanism to ensure beneficiaries are not liable for charges above the legal limit.

Some of these factors, discussed below, are likely to become less of a problem in time; others may continue to impede the level of protection originally envisioned by the Congress.

Understanding the Limiting Charge. The ambiguity of the exact charge limits for 1991 and 1992 makes it difficult for beneficiaries and physicians to understand the policy. This is because the inclusion of MAACs in the calculation of limits continues to make such limits specific to individual physicians and procedures. As a result, physicians can obtain information on their charge limits only through the carrier.[9] The inclusion of MAACs has also prompted HCFA not to include limits on the new Explanation of Medicare Benefits (EOMB) form until 1993.[10] As a result, it is difficult for beneficiaries to determine whether a charge on a specific claim violates the charge limit.

This situation is likely to improve in 1993 when the limiting charge will be calculated on the EOMB. This will give beneficiaries ready access to evidence that the physician billed appropriately or in excess of the charge limit and can direct carriers to initiate intensive monitoring or other enforcement actions. The Commission enthusiastically supports HCFA's plan to include the charge limit on the Explanation of Medicare Benefits form in 1993 as an important step to empower beneficiaries and enhance their understanding of the policy.

Beyond calculation of the limiting charge on the EOMB, more could be done to improve beneficiaries' knowledge of the limiting charge policy. Neither the carriers nor HCFA appear to have taken action to ensure that beneficiaries are aware of the policy or how to determine whether or not they have been billed appropriately. Program changes, including the limiting charge, are explained in the *1991 Medicare Handbook*, but this publication is sent only to new beneficiaries.[11] Since those already enrolled in the program also need to know about these changes, HCFA should either distribute this handbook to all beneficiaries or develop a newsletter describing program changes that can be sent to beneficiaries at the beginning of the year.[12] Congress should provide adequate funding to the carriers to support development and dissemination of such materials.

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[9] This confusion may actually peak in 1992 when the fee schedule transition begins. Carriers are anticipating that there will be dramatic increases in the number of physicians challenging calculations of both the allowed charge and the limiting charge.

[10] At this writing, only one-third of the carriers are using the new EOMB. All are expected to be using it by May 1992. Older versions of the EOMB inform beneficiaries that they are liable for the entire difference between the submitted and approved charge, even if it exceeds the limiting charge. HCFA officials have commented that this will be changed.

Information about program changes should also be more broadly disseminated through Social Security check inserts and other means; for example, HCFA could prepare articles for newsletters and other publications distributed by beneficiary organizations.[13] Organizations that represent and communicate regularly with the elderly and disabled could assist in this effort by developing complementary strategies to inform their members, and working with HCFA to disseminate timely and accurate information.

Similarly, greater efforts should be made to ensure that nonparticipating physicians are notified about the charge limits. In 1991, due to the late passage of OBRA90, carriers did not send this information to physicians until the end of January.[14] Even after January 1, 1993, when the charge limit is a flat percentage of the fee schedule amount, carriers should clearly inform physicians about the charge limit, furnish examples for commonly provided services, and provide an easy mechanism for physicians to inquire about their charges.

In addition to "Dear Doctor" letters, carriers could be required to notify physicians in writing each time a potential charge limit violation occurs with a document similar to an EOMB. Currently, a letter is sent only to physicians who have violations exceeding $300; if violations persist, a second letter may be sent after three months. Prompt notification of physicians using a standardized form could be an effective tool in educating physicians about other payment policies as well (for example, the bundle of services included in the surgical global service). Organizations representing physicians could assist in this effort by developing specialty-specific strategies to inform their members.

Compliance with Balance Billing Limits. Case detection is also difficult because monitoring for compliance is not currently an integral part of the processing of unassigned claims. Instead, it is a separate post-payment operation, sometimes run long after beneficiaries have already paid their physicians and claims have been processed. In addition, because each carrier has its own monitoring software, there may be differences in the comprehensiveness of these monitoring programs.

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[11] At this writing, the *1992 Medicare Handbook* is expected to be released at the end of March.

[12] HCFA estimates that sending the handbook to all beneficiaries would cost $14 million; sending a newsletter with information on program changes would cost about $7 million. While the Office of Public Affairs developed such a newsletter to be sent out after passage of OBRA90, limited funds allowed for distribution only through grocery store displays and senior centers.

[13] The Social Security Administration charges HCFA $4 million per check insert.

[14] HCFA instructed carriers to relax monitoring for the month of January 1991 so as not to penalize physicians who billed in excess of the limit before they received their limits from the carrier.

As with understanding of the limiting charge policy, this situation may improve in 1993. Carriers are changing their computer systems to comply with other aspects of physician payment reform (for example, implementation of a uniform surgical global service package). As a result, these operational changes will make it relatively simple for carriers to monitor compliance with balance billing limits by conducting prepayment screening of all unassigned claims as an integral part of claims processing (Bruegger 1992). This is because carriers will no longer have to consider fee screens for individual physicians and individual MAACs in calculating limits. For all procedures and for all physicians, the charge limit will be a simple percentage of the fee schedule amount.

While prepayment screening is relatively inexpensive, additional carrier funding may be necessary to follow-up on any problems identified. Congress should ensure that the carriers have sufficient funds to undertake these activities.

Taking Appropriate Action. The ability of the Medicare program to take appropriate action when monitoring identifies noncompliance depends on two factors: (1) the standard of proof required to demonstrate that charges in excess of the limit are subject to sanctions and (2) clear delineation of the responsibility for enforcement within the Department of Health and Human Services.

Standard of Proof. It has been suggested that few cases are pursued by the OIG for additional enforcement action because it is unlikely to win money penalties. This may reflect the difficulty in proving that a physician "knowingly and willfully" violated the charge limit on a repeated basis. This language provides protection to physicians who may be genuinely confused about the limits (as many acknowledge they were with the MAAC system) or other aspects of the new payment system (such as new definitions of the surgical global service package). Yet the language of the law also appears to impede protection of beneficiaries, because it is so difficult to prove that physicians' actions were knowing and willful.

In the Commission's view, confusion about the limiting charge will likely diminish as physicians become more familiar with the new fees, limits, and standardized payment policies under the fee schedule. Even so, honest mistakes (either on the part of the physician or the carrier) should provide an opportunity for learning. Physicians need to know when they may have violated the law both so they can make an appropriate restitution to their patient and so they can change their behavior in the future.

The program's ability to prove that a violation was intentional may improve if physicians are provided more information about potential violations. Sending physicians a document similar to an EOMB each time the charge limit is exceeded may help build a case that the physician's behavior was knowing and willful. Such a document should be carefully designed and worded to be an educational, rather than a punitive, tool.

Enforcement Authority. Currently, there appears to be some confusion as to which agency within the Department of Health and Human Services is responsible for enforcing the limiting charge. Under MAACs, enforcement authority was delegated by the Secretary to the Office of the Inspector General. Although carriers had the initial responsibility for notifying physicians and conducting intensive monitoring, they were advised to refer cases to the Office of the Inspector General to determine whether civil money penalties or other sanctions should be applied. These instructions to carriers have not been changed since the limiting charge replaced MAACs.

Sources within the OIG have told Commission staff that they are not responsible for enforcing the limiting charge because the Secretary has not delegated this authority. Thus, although it is unclear how many cases have been referred by carriers to the OIG since the limiting charge went into effect, there is the potential for cases to languish once referred.

Moreover, the sentiment within the OIG is that enforcement of MAACs, unlike enforcement of fraud and abuse provisions, does not require criminal investigation and therefore could be handled adequately by HCFA or its carriers. Within HCFA, there also appears to be some feeling that the carriers could manage this task more efficiently and more effectively.

In the Commission's view, financial protection of beneficiaries depends in part on the ability of the Medicare program to impose sanctions when appropriate. To do so, a single agency within the Department of Health and Human Services must be clearly delegated the enforcement authority.

Beneficiary Liability. Although the Congress clearly expected balance billing limits to constrain beneficiary liability, current law does not appear to ensure a refund to beneficiaries who pay their physicians at the time of service and only later learn that the balance bill exceeded the legal limit.[15] As written, the law only subjects physicians who charge in excess of limits to civil sanctions and money penalties. There is no language stating that beneficiaries are not liable for those excess amounts, and there is no authority for HCFA or the carriers to seek refunds from physicians on beneficiaries' behalf.

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[15] Although submission of claims is the responsibility of the physician in all cases, payment on unassigned claims is made to the beneficiary. In many situations, patients are asked to pay the physician in full before leaving the office. As a result, beneficiaries may not be aware if they were overcharged until after they receive an EOMB some weeks later.

Some beneficiary advocates have argued that despite this omission, beneficiaries cannot be held liable for charges that are illegal. This would be true if the law said "it is unlawful to charge..." because an individual cannot be held to the conditions of a contract made for the purpose of an illegal action. The law, however, was not written this way. Instead, it only says that physicians who do charge above the limit may be subject to certain sanctions.

The Commission has also learned that this language is creating confusion for insurance carriers that provide coverage that supplements Medicare (commonly referred to as Medigap). Many of these payers have interpreted OBRA89 to mean that their liability for balance bills of subscribers is constrained by the limiting charge. But the National Association of Insurance Commissioners has instructed its members that this interpretation is incorrect. OBRA89 does not relieve beneficiaries of the liability for balance bills exceeding the charge limit. Therefore, unless the carrier's policy specifically limits coverage of balance bills to the amounts specified in OBRA89, Medigap carriers must pay up to the limits stated in the policy, even if this exceeds the charge limit.

Thus, to ensure that beneficiaries are not held liable for excess balance bills, Congress must clarify the law. First, the statute should be changed to make it explicit that beneficiaries are not liable for amounts billed above the limiting charge. Moreover, additional language should be added that requires physicians to refund to beneficiaries any amount above the legal limit.

Such a change would be important to beneficiaries for two reasons. First, it would help those who paid their bill before receiving an EOMB to approach their physician directly rather than going through the carrier. If the physician is then unwilling to make a correction, they would have the option of going to court to recover any amounts paid above the charge limit. Second, for those beneficiaries who do not pay the physician until after receiving an EOMB, such language would provide protection from having their account turned over to a collection agency or being taken to court by the physician.

MONITORING ACCESS TO CARE

On May 15 of each year the Commission submits a report to the Congress on Medicare beneficiaries' access to care. This year's report will comment on the Secretary of Health and Human Services' efforts to assess the state of Medicare beneficiaries' access to care. In addition, it will present the Commission's detailed analysis of baseline Medicare claims data.

This section previews the Commission's report. After a brief summary of the legislative mandate and prior work, progress in using claims data to monitor access to care is reviewed. Finally, an outline is presented for work to be undertaken after the May 15 report, focusing on Medicare's Current Beneficiary Survey (CBS) and other sources of survey data.

Legislative Mandate and Background

Maintaining an acceptable level of beneficiary access to care is crucial to the success of Medicare physician payment reform. The new payment system, however reasonable, will not be judged a success if despite gains in access for some beneficiaries, there are deteriorations for others.

Recognizing this, the Congress provided for monitoring of beneficiaries' access to care. OBRA89 directs the Secretary of Health and Human Services to report annually on changes in the utilization of, access to, and appropriateness of care. It also directs the Commission to review and comment on the Secretary's report.[16]

In order to respond to the congressional mandate to review and comment on the Secretary's report and to assure the Congress that methods for monitoring access are adequate, the Commission convened an Advisory Panel on Access, consisting of physicians, beneficiary advocates, and researchers with expertise in the measurement of access to care. This panel met twice in 1991 to suggest approaches and methods for measuring Medicare beneficiaries' access to care.

The Commission's 1991 report to Congress on monitoring access (PPRC 1991) incorporated many of the panel's suggestions. The report recommended that the Secretary release standardized and timely Part B data summaries, and that the Secretary undertake efforts to monitor beneficiary access during the first year of fee schedule implementation. The Commission also presented its own plans for monitoring beneficiary access, focusing on measures of access that might be developed from Medicare claims data.

Since the 1991 report, the Commission has worked to identify those indicators of access that may feasibly be calculated using Medicare claims and other data. Nearly complete Medicare claims data for a 5 percent sample of beneficiaries was acquired in November 1991, and data for a 1 percent sample of beneficiaries is being used to test selected measures.

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[16] OBRA89 calls for the Secretary to produce three related reports on May 15 of each year: one to track trends in outlays and volume (the Volume Performance Standard [VPS] report), one to track changes in beneficiaries' out-of-pocket costs, and one to monitor changes in utilization and access to care. The Secretary must recommend fee updates in the VPS report. The Secretary may recommend additional changes in any of the reports.

While claims data will form the core of this year's analysis of access, information from surveys will play a growing role in subsequent years. The principal and richest source of survey data will be the Current Beneficiary Survey, in which 12,000 beneficiaries will be interviewed on an ongoing basis. The CBS will collect such direct measures of access as difficulty in finding a physician, waiting times for appointments, and denial of care for financial reasons. The Commission's plans for use of the CBS and other survey information are summarized after the following discussion of the uses of claims data.[17]

An Initial Focus on Baseline Claims Data

This year's report on access will focus on analysis of Medicare claims data from the period before implementation of the Medicare Fee Schedule. Data from this baseline period will be used to evaluate different measures of access to care and to provide a profile of Medicare beneficiaries' use of services prior to payment reform. In subsequent reports, data from 1992 and later years will be contrasted with these baseline levels of utilization to assess the impact of the fee schedule on access to care.

This initial focus on baseline claims data is driven in part by the need to develop and test measures of access to care. The stability and validity of various measures must be assessed prior to their use as indicators of changes in access under the fee schedule. For example, measures of access should ideally be stable from year to year. Measures showing large annual fluctuations in the historical data will be of limited use in detecting changes in access associated with implementation of the fee schedule.

The focus on historical data is also driven by the availability of information. Reliable claims data from the first quarter of 1992 will not be available until the third quarter of 1992. Information from various surveys, particularly the CBS, is not yet obtainable. Thus, from the standpoint of availability, this year's report on access is limited primarily to the analysis of historical data.[18, 19]

Claims data provide detailed objective information about the quantity of care delivered to the Medicare population. It is a difficult process, however, to translate this raw information on quantity of services into judgments about the effects of payment reform on access to care. At a minimum, monitoring access through Medicare claims data will eventually include three distinct steps: tracking trends in utilization, attributing changes in utilization to the implementation of the fee schedule, and interpreting those changes in utilization as changes in access to care.

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[17] The CBS was first fielded in the fall of 1991. Data from this first round of questions will not be available before mid-1992.

[18] Discussions with HCFA staff indicate that the Secretary's 1992 report on access will probably also focus on historical claims data, again because reliable 1992 data are not yet available.

[19] The Commission hopes to provide an update to this report in the fall of 1992 that will include data from the first few months of implementation of the fee schedule.

Tracking Trends in Utilization. The first step in using claims data to monitor access to care is to be able to track trends in utilization per beneficiary for specific procedures and health care events across tightly defined beneficiary populations. To achieve this, consistent and detailed claims data must be obtained both before and after the implementation of payment reform.

Nearly complete Medicare claims and enrollment information for roughly 1.5 million beneficiaries has been acquired for the years 1986 through 1990.[20] These beneficiaries are HCFA's standard 5 percent sample and should accurately represent the entire beneficiary population. Information available includes an abstract of each hospital discharge, a bill for each Part B physician charge, a bill for each use of a hospital outpatient department, and enrollment information for each beneficiary in the sample.

These data allow significant subpopulations of Medicare beneficiaries to be identified. For example, utilization may be calculated by beneficiary age, race, and sex, and for a wide variety of geographic areas such as rural areas, inner-city areas, and Health Professional Shortage Areas (HPSAs).

Counts of individual procedures, visits, and episodes of care may also be constructed from such data. Simple measures might include the number of office visits or counts of particular surgical procedures. Slightly more sophisticated measures might be based on admission to the hospital for selected conditions. Still more complex measures will be based on entire patterns of care, for example, admission to the hospital without prior physician contact and direct admission through the emergency room.

Attributing Changes to the Effects of Payment Reform. The second step in using claims data to monitor access to care is to be able to attribute changes in utilization to the effects of payment reform. The goal is to separate out the effects of payment reform from other factors such as preexisting trends, changes in technology, and other changes in the practice of medicine. To achieve this, various control groups must be identified that are relatively unaffected by payment reform. These control groups may be selected using either Medicare data or data from other payers.

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[20] These data were supplied through a considerable effort on the part of staff of the HCFA Office of Statistics and Data Management, Bureau of Data Management and Strategy. The basic data required 224 computer tape cartridges. The Commission thanks them for this extraordinary labor.

Within the Medicare beneficiary population, control groups may be constructed by taking advantage of variation in the change in fee levels across geographic areas that is expected to occur with the payment reform. For a specific procedure, the change in utilization in areas with sharp fee reductions could be contrasted to the change in utilization in areas with only slight fee reductions or fee increases. If reduced fees affect use, the largest changes should occur in areas with substantial fee reductions. If reduced fees do not affect use, both types of areas should show similar changes in utilization based on existing trends, introduction of new technologies, and ongoing changes in the practice of medicine.

A second approach to finding good control groups is to track utilization for populations other than Medicare beneficiaries. Although the Medicare Fee Schedule may have an impact on both pricing and service delivery outside the Medicare program, its first and primary impact should be on Medicare beneficiaries' utilization of services. To some degree, then, contrasts between Medicare and non-Medicare populations may show whether fee changes have affected the delivery of services to Medicare beneficiaries.

Both these approaches may provide useful information on the impact of the fee schedule. Recent simulations show that for some groups of procedures, office visits, for example, there will be considerable variation in the change in fees due to the implementation of the Medicare Fee Schedule. This should allow a relatively strong inference about the effects of the fee change on utilization based on Medicare data alone. For other procedures, particularly those affected by prior overvalued procedure fee reductions, the fee reductions due to implementation of the Medicare Fee Schedule show less geographic variation. For these procedures, inference based on Medicare data alone may be somewhat weaker, and data from other payers may strengthen any conclusions concerning the impact of the fee schedule.

Interpreting Changes in Terms of Access to Care. The third and most difficult step in using claims data to monitor access to care is to interpret changes in utilization in terms of changes in access. For example, a reduction in utilization does not by itself indicate whether needed and appropriate services have been foregone, or whether there has simply been a decline in the level of inappropriate care. For many procedures, indications are sufficiently equivocal that a change in utilization may never have an unambiguous interpretation as a change in access to care.

The Commission, acting on advice from its Panel on Access, has adopted a general strategy of tracking tightly targeted utilization measures for those vulnerable populations who are most at risk for reductions in access to care. By examining utilization rates for populations whose access is already thought to be relatively restricted, and by considering selected procedures or medical events, the Commission hopes to be able to interpret changes in utilization in terms of changes in access to care.

Vulnerable Populations. In addition to tracking trends in utilization for the entire beneficiary population, the vulnerable populations that may be most at risk for loss of access under the new fee schedule will be identified. These are primarily beneficiary groups that may currently have difficulty obtaining adequate access to care.

Detailed contrasts between these populations and other Medicare beneficiaries can be useful for two reasons. First, these populations may provide an early warning for Medicare beneficiaries in general. In the event that the fee schedule reduces access in some areas, these populations are likely to be the first to lose access, and will probably experience more significant reductions in access. Second, because these populations are thought to have relatively poor access now, further reductions in access to care would be immediate cause for concern.

Progress in identifying these groups is summarized below:

- Medicare enrollment data allowed several beneficiary populations to be identified directly. These include the old (those over age 85), the disabled, dual eligible (Medicare and Medicaid) and Qualified Medicare Beneficiaries (QMBs), and non-white beneficiaries.

- County or ZIP code of beneficiary residence was used to identify selected geographic areas. These include frontier rural areas, inner-city poverty areas, and Health Professional Shortage Areas.

- Private sector payment has been used to identify beneficiaries living in areas with the largest differentials between Medicare and private payers' fees.

- Claims data will be used to identify the mentally disabled and those living in nursing homes.

Measures of Access. Utilization statistics that may have a relatively clear interpretation in terms of access to care will be identified. For example, if preventive care services are generally thought to be underused, then increased use of those services could reasonably be interpreted as evidence of better access to care. Conversely, an increase in hospitalizations that could have been avoided by adequate primary care might be interpreted as the effect of reduced access to care.

In addition to tracking utilization for broad classes of visits and procedures, utilization of very specific and targeted measures of access will be monitored:

- The Commission is attempting to identify hospital admissions for the elderly that might have been avoided through timely and adequate care. These are typically admissions for conditions where a lack of early detection and management leads to more radical treatment. For example, inadequate monitoring of blood pressure and medications may result in hospitalization for uncontrolled hypertension.

This work builds on existing research in several ways (Carr et al. 1988; Billings and Hasselblad 1989). First, more than 100 physicians were surveyed to develop a Medicare-specific list of admissions of this type. Perhaps more important, both inpatient and outpatient data are available for the Medicare population, allowing the Commission to examine empirically the linkage between hospital admission and a lack of adequate prior treatment. Only those admissions demonstrably related to low levels of prior outpatient care will be used as markers for potentially avoidable admissions.

- The number of physicians serving Medicare beneficiaries and the concentration of Medicare services across physicians is a very direct measure of beneficiary access to mainstream care. Unfortunately, it is impossible to identify individual physicians in Medicare historical data on a national basis.[21] However, the use of public providers such as outpatient departments of large urban public hospitals can be tracked using institutional outpatient bills from such providers. Increased use of such providers for primary care might provide an indicator of reduced access to mainstream health care.

- Aggregating claims into episodes of care can help move the question of access away from gross utilization statistics toward the question of access to appropriate care. For example, an individual hospitalized for heart attack should see a physician after discharge. The Commission has begun examining patterns of care for a few severe, chronic diseases. This research will explore the relationship between outpatient management of these diseases and the prevalence of acute inpatient episodes of care.

- Mortality is one of the few outcomes measures easily identifiable from Medicare administrative data. Excess mortality rates (actual mortality rate versus the mortality rate that would be expected based on the age and sex mix of the population) will be calculated and tracked for various populations and geographic areas.

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[21] Eight Part B carriers did assign unique physician billing numbers during this period. For these carriers, it may be possible to construct a consistent count of physicians prior to and after 1992. For the nation as a whole, however, HCFA staff indicate that it is not possible to cross-walk the older carrier-assigned billing numbers to the new Unique Physician Identification Numbers.

- Use rates for primary care services such as visits have been calculated from the Medicare claims files. The panel suggested that the content of the visits is possibly more important than the sheer number of visits. The Commission is working to develop indicators of visit content based on Medicare claims data.

- Few preventive care services are covered by Medicare. In general, however, those preventive services that are covered are utilized at rates substantially below the rates recommended by public health experts. Within the Medicare program, the Commission will be able to track the provision of mammograms, Pap smears, and pneumococcal vaccine.

Beyond the May 15, 1992 Report: Survey Data

After the May 15 report, the Commission will turn its attention to two further aspects of monitoring access. First, it will begin to acquire Medicare claims data from 1991 and 1992 and will start to estimate the initial impact of the fee schedule on utilization and access. Second, it will begin analysis of the data from Medicare's Current Beneficiary Survey and other surveys. This section summarizes the survey information which the Commission hopes to obtain after the May 15, 1992 report.

The CBS is a longitudinal survey of approximately 12,000 Medicare beneficiaries currently being implemented by HCFA's Office of the Actuary. Several times annually, face-to-face and telephone surveys will gather information on the beneficiaries' utilization of and expenditures for medical services, health status and functioning, as well as the beneficiaries' satisfaction with and perceptions of problems in gaining access to care. In addition, the CBS will be linked to Medicare claims files, making available detailed data on actual utilization.

The CBS was first fielded in September 1991 using in-person household interviews to gather information on such items as satisfaction with care, foregone or delayed care, usual source of care, and the extent to which beneficiaries have difficulty finding different types of physicians (primary care and specialists) or physicians who accept assignment. The initial round of the CBS will provide a snapshot of beneficiary access to care prior to implementation of the fee schedule. This panel of questions regarding access to care will be repeated annually, allowing beneficiaries' access to care to be tracked throughout the fee schedule implementation.

Although the CBS is in many ways an outstanding vehicle for monitoring access to care, it does have some limitations. One is timeliness. Survey data on access to care during the implementation of the fee schedule will first become available in mid-1993, too late for the

Commission's 1993 report on this subject.[22] In addition, the CBS provides information only on the experience of Medicare beneficiaries.

Because physicians are also a potentially useful source of information on access to care, the Commission plans to explore the feasibility of collecting survey data from them. It will look to the potential of building on existing surveys of physicians conducted by the American Medical Association and other physician organizations, as well as conducting targeted surveys or focus groups.

More timely data on beneficiaries might also be obtained from diverse sources. The American Association of Retired Persons (AARP), for example, tracks the complaints it receives regarding Medicare, and occasionally conducts surveys of its membership. The Commission may look to information of this sort or may conduct beneficiary focus groups to help identify potential problem areas during the first years of fee schedule implementation.

Finally, other surveys not specifically targeted to the Medicare population may also be useful in monitoring changes in utilization. In particular, the National Ambulatory Medical Care Survey (NAMCS) conducted by the National Center for Health Statistics may provide interesting contrasts of visit use and content before and after physician payment reform. NAMCS is an ongoing survey that collects information on visits provided by a sample of physicians. Because NAMCS contains comparable information on the Medicare and non-Medicare populations both before and after physician payment reform, it may be a useful source of information for examining the impact of payment reform on the delivery of office services.

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Carr, Willine, Natan Szapiro, Toni Heisler et al., *Measuring Avoidable Deaths and Diseases in New York State* (New York: United Hospital Fund of New York, January 1988).

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[22] The CBS questions on access to care were first fielded in September 1991, and will be fielded again in September 1992. Preliminary data from that second round should be available to federal researchers by mid-1993.

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CHAPTER 4

PRACTICE EXPENSE RELATIVE VALUES

The Medicare Fee Schedule is composed of three distinct components that correspond to the three types of resources physicians use when providing services to patients: physician work, practice expenses, and malpractice expenses. The physician work component has been developed from research explicitly designed to measure the relative amount of work required to deliver each service in the fee schedule. The practice and malpractice expense components of the new Medicare Fee Schedule, on the other hand, are calculated from historical charge levels and practice expense revenue shares by physician specialty, as specified in the Omnibus Budget Reconciliation Act of 1989 (OBRA89). Practice expenses, which include the costs of staff, supplies, equipment, rent, and utilities, account for more than 40 percent of physician revenues.

The Commission has been concerned that the OBRA89 methodology gives historical charge levels, rather than actual resource requirements, a primary role in setting practice expense payments under the fee schedule. In its 1989 report to Congress, the Commission promoted using an additive formula for the fee schedule that included a practice cost component similar to the one defined in OBRA89. At that time, however, it suggested this was only an interim approach and described plans to develop improvements: "Using detailed data on practice costs, cost allocation methods can help apportion practice costs to services more accurately" (PPRC 1989).

The Commission has spent more than two years developing an alternative method for determining practice expense relative values that better reflect the relative resource requirements of each service. It developed a theoretical framework for resource-based practice expense relative values from common accounting practices, which was first described in its 1990 annual report (PPRC 1990). The Commission then conducted a pilot test of the framework, for which data were collected from three multispecialty clinics (PPRC 1991). The results of that study are summarized in this chapter.

RECOMMENDATION

The Commission continues to support in principle basing the practice expense component of the relative value scale on estimates of resources rather than on historical charges as specified in OBRA89. It has developed and tested the feasibility of a resource-based method and will continue to refine elements of the method through additional analyses and extensive discussion with interested parties.

The Congress should direct the Health Care Financing Administration (HCFA) to create a database that can be used to develop estimates of a resource-based practice expense component of the Medicare Fee Schedule and thoroughly evaluate its impact. HCFA is currently supporting several projects that involve the collection of data that might be appropriate to start such a database.

In short, the Commission's resource-based approach divides practice expenses into direct and indirect costs. Direct costs are those that are attributable to providing a particular service, such as the film used to make an X-ray. Indirect costs are those common to many services, such as office rent. During the past year, the Commission has analyzed a resource-based method using direct cost data gathered from three multispecialty practices and through meetings with researchers and practitioners. These efforts are detailed in a technical report that is being released at the same time as this report (PPRC 1992). The Commission continues to favor an approach to calculating practice expense relative values under the Medicare Fee Schedule that is based more on the actual resources used to deliver a service, but recognizes that this method needs more thorough testing.

This chapter has three sections. The first briefly summarizes both the OBRA89 methodology and the Commission's resource-based practice expense method.[1] The second presents the research conducted by the Commission. The final section describes the outstanding research issues in this area, including several that the Commission plans to address in the future.

PRACTICE EXPENSE RELATIVE VALUES: TWO METHODS

Under OBRA89, practice expense relative values are determined by a formula based on historical charge levels and physician survey data about the share of total revenues devoted to practice expenses. A practice expense revenue share is calculated for each service by taking a volume-weighted average of revenue shares of the specialists who perform the service. This service-specific revenue share is then multiplied by the average historical allowed charge to determine the service's practice expense relative value. If, for example, a service is provided half of the time by general practitioners whose practice expense share is 52.2 percent, and the other half of the time by gastroenterologists whose share is 40.5 percent, then the service's practice expense share is 46.35 percent; the service's practice expense relative value is determined by multiplying its average allowed charge by 0.4635.[2] For services provided only by gastroenterologists, the practice expense relative value is simply 0.405 times the average allowed charge. Therefore, for services provided only by one specialty, the resulting variation in relative values is determined solely by average allowed charges. For services provided by more than one specialty, the values reflect both average allowed charges and the weighted average of specialty revenue shares.

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[1] Readers interested in more complete descriptions of the OBRA89 and resource-based approaches and of the Commission's research are referred to the *Annual Report to Congress 1991* and *Practice Expenses Under the Medicare Fee Schedule: A Resource-Based Approach,* Report No. 92-1, March 1992.

[2] Revenue share data, based on American Medical Association surveys, are taken from the Final Rule (*Federal Register* 1991).

This approach is not consistent with the relative resource use concept used to develop the physician work component of the Medicare Fee Schedule. It appears to be inequitable to physicians for at least two reasons. First, historical charge levels do not necessarily vary with resource costs and thus are unlikely to generate relative values that accurately reflect relative resource use across services. Second, the use of a service-specific revenue share is likely to distort relative payments. Specialists who furnish many services that are also provided by others with lower practice expense revenue shares may not recover their expenses, since each service's share reflects those of other specialists as well.

The Commission's resource-based approach to calculating practice expense relative values uses common accounting principles to allocate costs to services. Although this approach includes all costs, it divides them into two categories to reflect traditional accounting methods: direct costs, which can be tied to the delivery of a particular service, and indirect costs, which are common to the delivery of many services. Under the Commission's framework, direct costs include clinical staff salaries, medical supplies, medical equipment, and a share of office staff salaries. Indirect costs include office supplies and equipment, rent, utilities, and the bulk of office staff salaries. Data on direct costs for each service must be collected from practices, while indirect costs are allocated using a formula, again following standard accounting procedures. Although they use different strategies to allocate payment amounts to each service, the OBRA89 and resource-based approaches lead to the same aggregate payment for practice expenses for all Medicare services.

The Commission believes that the sum of physician work and direct cost payments is the most appropriate basis for allocating indirect costs. This basis allows physicians to recover rent and other indirect costs at some constant rate per unit of work. It also acknowledges that additional direct costs tend to produce additional indirect costs: equipment requires space, staff require management, and so on. This basis is consistent with modern accounting practices.

The resource-based approach allows for explicit accounting of the various resources for which physicians are responsible in different settings. Most direct costs are incurred only for services delivered in physicians' offices, since other facilities generally provide and are paid separately for resources associated with services rendered by physicians outside of their offices.[3] For example, the Medicare Part A payment for an inpatient operation covers the cost of the operating room staff and necessary supplies; in most cases, the physician is not financially responsible for these resources.[4]

HCFA has implemented a site-of-service differential as part of the Medicare Fee Schedule. It has identified 380 services primarily provided in physicians' offices that are subject to a site adjustment (*Federal Register* 1991). When these services are furnished in hospital outpatient departments (OPD), the practice expense relative value is reduced by 50 percent before the total fee is calculated.

The Commission supports the introduction of payment differences by site. But it is concerned that the use of a fixed percentage differential for all services may not be accurate. Therefore, the fixed percentage adjustment will be inequitable to physicians and may introduce undesirable incentives. For example, if the practice expenses actually incurred by physicians when providing a service that requires many supplies and extensive medical staff support in their offices are more than twice those incurred in OPDs, physicians have financial incentives to furnish the service in outpatient departments. However, if a service actually requires few resources in addition to physician work, then physicians may receive a financial reward for providing it in their offices.

The Commission has articulated an incentive-neutrality principle stating that physicians' decisions should be insulated from consideration of financial risk or reward, so payment differences should reflect estimates of the expenses they will incur in various settings. The resource-based method allows for the development of service-specific site differentials. Under this scheme, the difference between office and non-office payments can vary by service, avoiding the problems related to a fixed percentage adjustment.

COMMISSION'S RESEARCH

To investigate the resource-based approach, the Commission collected direct cost data for several hundred services from three multispecialty clinics, chosen on the basis of the quality of their accounting data. These data were not sufficient to develop estimates of direct costs that are representative of all office-based practices. Nevertheless, they were useful for studying the feasibility of developing resource-based estimates and understanding the issues involved in doing so. With these direct cost data, Commission staff performed all the steps necessary to calculate relative values using the resource-based framework. The resulting estimates must be viewed simply as the product of a pilot study; the few services included and the small number of practices that contributed direct cost data limit the applicability of the estimates.

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[3] Physicians are also responsible for direct cost elements when providing care in patients' homes and long-term care facilities.

[4] The Commission plans to investigate issues related to those cases when physicians use their own staff to provide services in non-office settings.

The three clinics supplied detailed data on direct costs.[5] Clinic staff recorded the staff time (by type of personnel) and medical supplies used to provide each of several hundred services identified by Current Procedural Terminology (CPT) code. In addition, they furnished detailed information about the specific services provided with each piece of medical equipment. This information, combined with equipment price data and service volumes, allowed for calculation of service-specific unit equipment costs. All services, regardless of setting, were assumed to incur a fixed billing cost. Therefore, the labor, supplies, and equipment data were combined with this billing cost to create total direct costs.

The total pool of practice expense payments was divided into direct and indirect cost pools based on revenue share survey data. The direct cost pool was allocated with regard to these total direct costs. The indirect cost pool was distributed in proportion to the sum of physician work payments and payments for direct costs, reflecting the allocation basis described above.

The practice expense relative values estimated in this exercise differ substantially from those obtained with the OBRA89 methodology. Overall, 26 percent of practice expense payments are reallocated under the resource-based estimates compared with OBRA89 payments.[6] The estimates suggest that, in general, office-based services would receive relatively higher payment under the resource-based approach (Table 4-1). This is largely because the resource-based approach assigns relatively lower direct cost payments to non-office services. Physicians incur limited direct costs when providing these services, since most direct costs are incurred by the hospital or outpatient facility for these non-office services.

As the site-of-service differential described in HCFA's Final Rule (see Chapter 2) is developed and refined, there will be some shift of practice expense payments from non-office to office settings. Under the OBRA89 framework, however, this shift will occur only for services provided in both settings. HCFA can adjust the practice expense component of some procedures so that it is lower when delivered in outpatient clinics and higher when furnished in physicians' offices; presumably, the agency can also expand the list of services subject to this adjustment. However, within the OBRA89 framework, HCFA cannot lower the value of a procedure provided only in non-office settings in order to raise the value of a procedure provided only in offices.

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[5] The Commission's calculations are based largely on data from one clinic; data from the other two clinics were used to study across-clinic variation in staff and supply costs.

[6] Dollars reallocated are defined as one-half of the sum of the absolute value of the difference between OBRA89 and resource-based payment for each service multiplied by its volume.

Table 4-1. Practice Expense Payments under the Resource-Based (RB) and OBRA89 Method for Five Services (in dollars)

	PRACTICE EXPENSE			TOTAL PAYMENT			AVERAGE CHARGE
Service And Site	RB	OBRA89	Ratio	RB	OBRA89	Ratio	(BMAD)
DRAINAGE OF SKIN ABCESS (10060)							
Outpatient Department	$16.11	$6.58	2.45	$50.74	$41.21	1.23	$27.03
Other Non-Office	16.11	13.17	1.22	50.74	47.80	1.06	29.53
Office	56.13	13.17	4.26	90.76	47.80	1.90	30.78
CORONARY ARTERY BYPASS GRAFT (33512)							
Other Non-Office	446.31	1105.04	0.40	1395.65	2054.38	0.68	2929.79
CYSTOSCOPY & URETER CATHETER (52005)							
Outpatient Department	37.24	66.11	0.56	115.37	144.25	0.80	169.64
Other Non-Office	37.24	66.11	0.56	115.37	144.25	0.80	164.26
Office	70.17	66.11	1.06	148.30	144.25	1.03	152.54
SPECIAL EYE EVALUATION (92020)							
Outpatient Department	6.60	4.29	1.54	17.76	15.46	1.15	23.10
Other Non-Office	6.60	8.59	0.77	17.76	19.75	0.90	24.14
Office	6.97	8.59	0.81	18.13	19.75	0.92	22.39
OFFICE/OUTPATIENT VISIT, ESTABLISHED (99213)							
Outpatient Department	9.01	5.58	1.61	26.46	23.04	1.15	18.97
Office	17.83	11.16	1.60	35.28	28.62	1.23	27.58

Source: PPRC practice data, BMAD I, Medicare Fee Schedule Final Rule.

Note: Resource-based (RB) estimates are based on limited direct cost data and should be interpreted as illustrative only.

The average charge is based on 1988 data aged to 1991. The resource-based OBRA89 estimates reflect the 6.5 percent baseline adjustment.

The Commission's resource-based estimates, though not necessarily representative of those that would obtain with more complete data, suggest that a resource-based practice expense component of the Medicare Fee Schedule would increase payments for evaluation and management (EM) services relative to those under the OBRA89 method (Table 4-2). Total payments for technical procedures would be comparable under the two approaches; total payments for diagnostic procedures would be about 20 percent lower under the resource-based approach, whereas those for surgical global services would be 29 percent lower. These estimates are preliminary and merely suggest the kinds of changes that might occur if the resource-based approach were adopted.

Table 4-2. Practice Expense Payments under the Resource-Based (RB) and OBRA89 Methods, by Service Family (in millions)

	PRACTICE EXPENSE PAYMENTS			TOTAL PAYMENTS		
Service Family	RB	OBRA89	Ratio	RB	OBRA89	Ratio
Evaluation & Management	$3795	$2864	1.33	$ 8817	$ 7885	1.12
Laboratory	20	27	0.73	39	46	0.85
Diagnostic Procedure	279	387	0.72	452	560	0.81
Technical Procedure	510	510	1.00	1147	1146	1.00
Surgical Global	648	1463	0.44	2006	2821	0.71
TOTAL	$5253	$5253	1.00	$12463	$12463	1.00

Source: PPRC practice data, BMAD I, Medicare Fee Schedule Final Rule.

Note: Resource-based (RB) estimates are based on limited direct cost data and should be interpreted as illustrative only.

The sum of payments for all services is equal to the sum of 1988 charges aged to 1991 and reduced by 6.5 percent to reflect the baseline adjustment.

It is important to understand what aspect of the resource-based approach is responsible for this redistribution. Therefore, to disentangle the effects of the treatment of direct and indirect costs under the resource-based approach, a hybrid OBRA89/resource-based method was used to generate practice expense relative values. The hybrid approach used direct costs as described under the resource-based methodology, but allocated indirect costs using historical average allowed charges, which are the basis of the OBRA89 method. The resulting estimates therefore reflect the effect of direct cost accounting combined with charge-driven indirect cost allocation. The simulations show the role of accounting for direct cost variation in the reallocation of payments between OBRA89 and the resource-based approach (Table 4-3). The hybrid estimates lead to reallocation of three-fifths as much money as the resource-based approach, relative to OBRA89. This implies that explicit accounting for variation in direct costs, which are only one-third of total practice expenses, is responsible for a large share of the total redistribution that would occur under the resource-based approach relative to OBRA89.

Table 4-3. Ratio of Resource-Based and Hybrid Payment to OBRA89 Payment for Practice Expense

RATIO	PERCENT IN RANGE Resource-Based to OBRA89	PERCENT IN RANGE Hybrid to OBRA89
Under 0.75	27.7	0.8
0.75 - 0.84	7.1	17.2
0.85 - 0.94	18.3	34.2
0.95 - 1.04	9.4	12.3
1.05 - 1.14	6.0	20.7
1.15 - 1.24	22.7	12.5
Over 1.24	8.9	2.4

Source: PPRC practice expense data, BMAD I, and Medicare Fee Schedule, Final Rule.

Note: Distribution is weighted by total BMAD payments.

Estimates are based on limited direct cost data and should be interpreted as illustrative only.

Much of the analysis described in the Commission's technical report is devoted to understanding the sensitivity of the final estimates to some of the design elements of the resource-based approach and to data accuracy. Various experiments were performed to test the effect of mismeasurement or redefinition of both direct and indirect costs on the resulting relative values. In particular, simulations were conducted to isolate the effect on final payment levels of:

- a 20 percent increase in wage and fringe benefit rates;
- a ten-fold increase in equipment costs;
- a 25 percent increase in per service billing costs;

- categorical (rather than continuous) measurement of labor, supply, and equipment costs;

- a 15 percent reduction in the percentage of practice expense treated as indirect costs (from 67.5 percent to about 57 percent); and

- the basis used to allocate indirect costs.

Of the nine sensitivity tests performed, only a change in the indirect cost basis led to a reallocation of more than 5 percent of practice expense payments from the baseline resource-based estimates, compared with the 26 percent reallocated between OBRA89 and the baseline estimates. This relatively small amount of reallocation reinforces the analysis of the hybrid estimates described above: explicit accounting of direct cost variation across services is the key difference between the OBRA89 and resource-based methods and leads to a substantial degree of reallocation of practice expense payments that persists regardless of indirect cost allocation rules.

Some effort was made to analyze inter-practice variation in staff and supply use as recorded by the three clinics that supplied data to the Commission. The small number of services studied at all three clinics made it difficult to determine the homogeneity in resource use, but some consistency across the three practices was found. The analysis was inconclusive, however, so more study of across-practice variation in resource use is needed.

Regardless of the degree of measured practice expense variation across different practice types and sizes, there is only one payment amount (adjusted to reflect geographic price differences) under the fee schedule. From a researcher's perspective it is interesting to understand practice expense variation, although it has no direct application in the context of a single fee schedule payment per service. This is especially true when the payment is determined by a charge-based formula such as that described in OBRA89, but may not be the case with a resource-based approach. Although there would still be only one value per service under the resource-based method, greater understanding of cost variation across practices for each service might lead to different policy decisions about what point of the distribution to use in creating relative values for different types of services. For some services, the median costs might be appropriate, while for others — those that require extremely expensive equipment, for instance — it might be more appropriate to use the costs associated with efficient practices.

The Commission contracted with the Medical Group Management Association (MGMA) to survey a limited number of single-specialty group practices in each of 10 specialties in an effort to study some of the issues of equipment use and costs in different practices.[7] The survey included questions about whether the practice owned or leased specific equipment items, the prices paid for any equipment present, the services provided with each piece of equipment, and service volumes. Although the level of unit costs reported varied extensively, relative unit costs across services were reasonably consistent. Even though the sample of practices and services was too small to make any definitive conclusions, the survey results suggest that relative unit equipment costs are fairly similar across practices.

REMAINING RESEARCH ISSUES

Combining the lessons learned from this pilot study with comments and issues raised by researchers and practitioners, the Commission believes several aspects of the resource-based approach should be further developed and refined. The key outstanding issues are:

- the types of costs that can be measured cost effectively and included as direct costs;
- inclusion of unit scheduling costs as a direct cost;
- the most cost-effective strategy to collect direct cost data;
- the effect of volumes used to calculate unit equipment costs on practices in rural areas;
- treatment of medical staff downtime;
- treatment of costs related to clinical staff assisting in non-office settings; and
- the type of practice that should underlie direct cost calculations (median, mean, or efficient).

In its work, the Commission used a fairly narrow definition of direct costs to simplify the data collection process. Theoretically, many costs — such as those for the space each piece of medical equipment requires — could be included as direct costs. It may be worth expanding the definition of direct costs and investigating a broader set of costs if a more comprehensive data collection task is undertaken. However, if additional direct cost items have a negligible effect on the resulting relative values, it would not be cost-effective to include them explicitly as direct costs. Therefore, the cost of collecting data on additional direct costs should be weighed against the expected impact on direct cost variation as the definition of direct costs is refined.

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[7] The surveyed specialties include: general/family practice, obstetrics/gynecology, gastroenterology, radiology, cardiology, pulmonary disease, urology, neurology, ophthalmology, and orthopedic surgery.

The Commission's resource-based method includes a constant direct cost item that reflects the unit billing cost of providing a service, regardless of site. A unit scheduling cost should be developed and included as another constant direct cost element for all services. This element may not vary across services, but is likely to differ by setting since more scheduling activities are involved in arranging for care away from the office than for that provided in the office. Therefore, a unit scheduling cost should be developed for both settings.

Collecting data on direct cost, which is central to developing more reliable resource-based estimates, is a major task. There are several ways to do this. First, a survey could be fielded to gather detailed labor, supply, and equipment cost information from a variety of practices. This strategy would require the development of clear, detailed survey instruments and instructions to increase the quality and comparability of responses. Conversely, practitioners could be asked simply to respond to the direct cost relative values the Commission developed in its pilot study. Although this approach is clearly more subjective, it decreases the reporting burden on respondents and probably would result in a much higher response rate. Finally, trained data abstracters could visit practices to collect information. Even though this is clearly the most expensive task, it is likely to lead to the most consistent and complete data. Researchers funded by HCFA are using this "microcosting" approach to collect extensive cost data from 48 outpatient departments, 48 freestanding clinics, and 48 physician offices. These data may prove to be valuable tools for further development of the resource-based method.

Because the resource-based approach involves calculating unit equipment costs, the Commission has been concerned about its implications for rural practices, where service volumes are relatively low. It has proposed that two tiers of equipment costs be developed, one reflecting the lower volumes seen in remote locations. This issue can be better analyzed once more data on equipment volumes in different areas are available.

Whereas these first four issues relate primarily to definition refinement and collection of data, the others — treatment of medical staff downtime, clinical staff use in non-office settings, and the type of practice (average, median, efficient) that should underlie direct cost calculations — relate to parts of the underlying framework that need to be better developed. Under the Commission's current framework, medical staff downtime, which is staff time not spent providing services to patients, affects the size of the direct cost pool but not the direct cost relative values. This treatment should be reanalyzed and alternatives considered.

Particular attention should be given to downtime while the physician is practicing outside of the office.

Similarly, it is important that the resource-based approach reflect costs associated with the use of clinical staff to furnish care in non-office settings. This issue relates to the relationship between Medicare physician and facility payments. The Commission's current framework is developed around the assumption that physicians do not provide these resources when furnishing care in other Medicare-reimbursed facilities, which are paid for their provision. If this turns out to be inaccurate, then there are implications beyond physician payment because it suggests that facilities are reimbursed for resources provided by physicians. The Commission is involved in a project with the Prospective Payment Assessment Commission (ProPAC) to investigate instances where physician and facility payment issues overlap.

The question of whether median, mean, or efficient costs should be used in developing resource-based estimates did not arise in the Commission's preliminary estimates since only one practice's direct cost data were used to calculate practice expense relative values. However, this will be an important issue once data are available from a variety of practices, especially if the measured costs vary widely. The differences between these measures could be substantial for services that use expensive pieces of equipment. Regardless of the method chosen to calculate the fee schedule component and the underlying variation in costs across practices nationwide, there is one level of practice expense payment for each service provided to Medicare beneficiaries under the Medicare Fee Schedule. Policymakers must be prepared to consider the relationship between the underlying distribution of costs and a single payment amount. Under the resource-based scheme, this relationship can be used to make decisions about the calculation of relative values, while use of a formula like the one in OBRA89 leads to relative values that relate in unknown ways to physicians' actual cost experiences.

As mentioned above, the resource-based approach allows for the use of different points on services' cost distributions to establish relative values for various services. For example, there may be some important, commonly provided services that are appropriate to value at median costs to ensure continued, widespread availability. On the other hand, more expensive services, such as those involving expensive equipment, may be more appropriately valued at efficient levels. The Commission will study this issue further so that it can contribute to the policy debate on this point.

The data collection tasks ultimately required by the resource-based approach are well beyond the Commission's means. HCFA would be responsible for estimating resource-based practice expense relative values if the Congress were to authorize such a modification of the Medicare Fee Schedule. Therefore, the Commission recommends that the Congress ask HCFA to start developing a database that would support calculation of resource-based relative values through a method consistent with that described in the Commission's technical report.

HCFA's microcosting study (described above) appears to be a good start towards this task. Its results are likely to provide HCFA with the information it needs to plan a comprehensive effort at data collection. This effort would be analogous to the extensive support provided when physician work measures were developed, which occurred long before the measures were included in the Medicare Fee Schedule. If such an effort were already under way, future policy discussions about methodology would not be hampered by considerations of the time and expense involved in collecting the data. Finally, these data would be useful even in the absence of resource-based relative values since they could support an analysis of variation in practice expenses that could lead to other improvements of practice expense relative values, including the refinement of the site-of-service differential.

The Commission is committed to further study of the resource-based method. At this point it can most effectively contribute by studying outstanding issues related to the resource-based framework. Among these are the treatment of staff downtime, staff use in non-office settings, and use of median, mean, or efficient costs in the calculation of relative values. It will continue to involve interested parties from organized medicine, other government agencies, and the research community as it studies these refinements of the resource-based method.

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CHAPTER 5

INCREASING THE AVAILABILITY OF HEALTH PROFESSIONALS IN SHORTAGE AREAS

Over the past two years, the Commission has examined the barriers to adequate health care confronted by many people in rural and inner-city areas of the United States. It has also assessed the potential of ongoing and proposed programs to eliminate these barriers and alleviate inequities in access to health care across geographic regions. Although a variety of approaches are required to improve access, the Commission has focused its attention primarily on the role payment policies play in increasing the availability of health professionals in underserved communities.

The premise that modifying payments to physicians will affect the provision of and access to care by influencing provider behavior has undergirded much of the Commission's work and recommendations. Its support of the Medicare Fee Schedule rested in part on the assumption that increasing fees for primary care would encourage the provision of these services. Similarly, by recommending a national fee schedule adjusted only for geographic variations in costs, the Commission was seeking to rectify historical payment inequities that could discourage rural practice. A desired outcome was that physicians currently in rural areas would be more willing to care for Medicare patients and, in the long run, that improvement in payments would lead to increasing numbers of physicians practicing in underserved rural areas.

As an initial step to moderate geographic variations in payments, the Commission recommended in its first report to Congress an incremental payment above the allowed charge for services delivered in designated underserved areas (PPRC 1987). In response, Congress enacted a 5 percent bonus payment for all services provided by physicians in the two categories of rural Health Professional Shortage Areas (HPSAs) with the greatest shortages.[1] As of January 1, 1991, the bonus payment is 10 percent and applies to all HPSAs, both urban and rural.

This chapter begins with a discussion of the Medicare bonus payment's role in increasing the availability of physicians in underserved areas. One conclusion is that while payment policies to increase the desirability of practicing in shortage areas are essential, other more direct federal measures are required to ensure adequate access in vulnerable areas. The chapter then turns to problems in identifying these vulnerable areas and considers how the Medicare program can more accurately target its bonus payment.

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[1] Until 1990, Health Professional Shortage Areas were referred to as Health Manpower Shortage Areas.

RECOMMENDATIONS

In recognition that Medicare payment reform policies are only a partial solution to addressing local shortages of health professionals, federal programs, such as the National Health Service Corps, should be expanded to meet the needs of populations that would otherwise have insufficient access to health care services.

Two modifications to current policy should be adopted to better target Medicare bonus payments. In areas in which HPSA status is withdrawn due to an increase in physician supply, Medicare should continue to provide bonus payments for an additional three years. Further, nonmetropolitan counties whose poverty rate exceeds 25 percent should automatically qualify for the Medicare bonus payment, regardless of their HPSA status.

THE MEDICARE BONUS PAYMENT AND PHYSICIAN SUPPLY

A key component in improving access to health care in rural areas and impoverished urban neighborhoods is the recruitment and retention of health professionals. Although physician supply has been steadily increasing in rural parts of the country, physicians remain scarce in the least populated areas. In nonmetropolitan counties as a whole, the primary care physician-to-population ratio increased by 33 percent from 1975 to 1985. Counties with fewer than 10,000 people, however, experienced an increase of only 5 percent during this same period (Kindig and Movassaghi 1989).[2] For these sparsely populated counties, the primary care physician-to-population ratio is on average 60 percent of that of metropolitan counties (HHS 1990). Many expect that these areas will continue to face shortages, despite the increasing supply of physicians in the United States overall.

While the situation is improving for many rural communities, this is not the case for inner cities. As more and more physicians establish their offices in the suburbs or wealthier urban areas, many poor urban areas are faced with a declining availability of office-based physicians (Kindig et al. 1987). With the incidence of poverty, crime, drug abuse, and AIDS growing in the inner cities, it appears that attracting physicians to these areas will continue to be difficult.

Physicians choose not to practice in traditionally underserved areas for many reasons. This suggests that multiple approaches are required to improve the availability of physicians in these vulnerable communities. This section first describes the factors affecting physicians' location decisions that place underserved areas at a disadvantage and the broad range of measures that are needed to address them. It then moves to a discussion of Medicare payment policies and their expected effects on improving the availability of practitioners in underserved areas.

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[2] Primary care physician counts include only allopathic, patient-care physicians.

Policies That Complement Financial Incentives

After a decade of diminished support for programs designed to meet the needs of underserved communities, the federal government has begun to take a comprehensive approach to alleviating shortages of health professionals in these areas. It has relied on payment policies that create financial incentives for practicing in underserved communities as well as policies that move beyond financial incentives. This approach recognizes that financial considerations are only one, and not necessarily the most important, determinant of where physicians locate.

In its 1991 report to Congress, the Commission reviewed the range of factors that affect a physician's decision on where to practice (PPRC 1991). Among the most important from the rural perspective are proximity of hospital facilities; access to continuing medical education (CME); and the presence of other physicians, which provides opportunities to join a group practice, interact with colleagues, and obtain coverage for patients when off-call. In addition to professional considerations, the physical environment and amenities of an area have some bearing on a physician's location decision (Cooper et al. 1977; Langwell 1985; Movassaghi and Kindig 1989; Rhodes and Day 1989).

In its 1991 report, the Commission expressed support for federal measures that attempt to enhance rural practice by increasing the medical resources available to physicians in remote areas. Such efforts include grant programs to improve the financial viability of rural hospitals or help them convert to alternative facilities and the creation of CME opportunities through Area Health Education Centers. The expanding use of technologies such as mobile medical facilities, air medical transport services, and telecommunication systems that facilitate physician consultations and CME has also improved the health care resources available to physicians and patients in remote areas. As for personal factors that deter physicians from practicing in rural areas, such as the lack of social, cultural, and educational opportunities, the Commission noted in its report that these are perhaps best addressed by medical schools stepping up efforts to recruit students who prefer the rural lifestyle.

Many of the factors that discourage physicians from practicing in the inner city are much more difficult to eliminate than the disincentives associated with a rural practice. Alternative policies appear necessary to compensate for the reluctance of many private office-based physicians to practice in low-income urban areas. The Commission has explored a number of alternatives, including expansion of community and migrant health centers (C/MHCs), delivery of health services in schools, and organized delivery of primary care by hospitals. In Chapter 6 of this year's report, it discusses these alternative delivery systems and recommends that the Congress fund significant expansion of new sites for C/MHCs and pursue opportunities to increase primary care services provided by hospitals and schools.

The National Health Service Corps (NHSC) is another federal program that seeks to compensate for the scarcity of private practitioners available to care for rural and inner-city populations. The NHSC offers scholarships and loan repayment to physicians in exchange for service in a HPSA for the number of years of tuition support received. Starting in 1981, the number of scholarships awarded each year was sharply reduced, in part because of reports of a predicted oversupply of physicians in the nation as a whole. It was assumed that the growing supply of physicians would result in physicians' dispersing into underserved areas as competition for practice opportunities in affluent urban and suburban areas increased.

It has since become apparent that certain remote and impoverished areas will continue to experience shortages of health professionals regardless of market forces or the establishment of financial or professional incentives. In recognition of this, the Congress enacted a revitalized NHSC initiative in November 1990. Whereas funding for the program in fiscal year 1990 amounted to only $51 million, the appropriation for fiscal year 1992 reached $100 million. This level of funding, however, falls short of earlier appropriations, which peaked at $154 million in 1980. The Commission applauds the steps that have been taken to revive the NHSC yet urges that the Congress continue its efforts to expand the program so that it can more adequately meet the needs of underserved populations.

In addition to federal programs such as the NHSC and C/MHCs, the Commission stresses the importance of nonphysician practitioners (NPPs) in meeting the primary health care needs of underserved communities. NPPs, including nurse practitioners, physician assistants, certified nurse midwives, certified registered nurse anesthetists, and clinical psychologists, are more likely to work in rural areas than are physicians. The professions of nurse practitioner and physician assistant, in fact, evolved in response to shortages of physicians in certain parts of the country. To take advantage of their presence in rural areas, an increasing number of states are granting NPPs prescription authority and greater autonomy to practice without the on-site supervision of a physician (Lutz 1991). Evidence of the growing role of NPPs in rural areas is seen in the recent increase in the number of Rural Health Clinics — facilities that must employ NPPs to receive preferential Medicare and Medicaid reimbursement. From January 1990 to May 1991, approximately 150 new clinics were certified (Lutz 1991).

To encourage retention of NPPs and potentially attract more of them to shortage areas, the Commission recommended in its 1991 report to Congress that the Medicare bonus payment be applied to the services of NPPs in both urban and rural HPSAs. This recommendation has been incorporated into Senate bills S.2103 and S.2104, which are pending. The Congress has already taken steps to enhance Medicare payment policies for nurse practitioners and clinical nurse specialists. Effective January 1, 1991, these practitioners can receive direct payment for the Part B services they provide in nonmetropolitan areas. In the future, the Commission plans to consider additional policies to expand the role of NPPs in providing primary care services to underserved populations.

Magnitude of the Effect of Financial Incentives

The rest of this chapter focuses on the use of payment policies to influence the spatial distribution of physicians. The Commission expects that changes in Medicare payments as a result of the Medicare Fee Schedule and the bonus payment will contribute to improving the supply of physicians in underserved areas.

Indeed, research suggests that income and, thus, payment incentives has some effect on physicians' location decisions (Hadley 1980; Ernst and Yett 1985; and Bogen et al. 1989). In particular, payment incentives can potentially play an important part in encouraging the retention of physicians currently in underserved areas. One review of the literature on physician response to earnings potential led to the conclusion that "inducements will likely strengthen the inertia for a physician retaining his/her existing practice location" (Bogen et al. 1989). Payment incentives seem less effective in attracting physicians to underserved communities. To recruit physicians who have established a practice elsewhere, a payment incentive would in theory have to offset the costs associated with starting a new practice and the nonpecuniary costs of uprooting oneself (Yett and Sloan 1974).

One would assume that new physicians who have not yet established a practice would be more responsive to payment incentives than those who would have to leave an existing practice; but this may not be the case. Studies of new physicians have found that income differentials do not significantly affect the decision to locate in a metropolitan versus a nonmetropolitan area (Kletke et al. 1991; Marder 1990).[3] Nevertheless, payment incentives could be one of the deciding factors for new physicians who are predisposed to locate in underserved areas.

The tentative conclusions drawn from the literature shed some light on the potential effect of Medicare payment reforms. The Medicare Fee Schedule will likely have some impact on physician distribution, as physicians in many rural parts of the country will experience substantial payment increases. Upon full implementation of the fee schedule in 1996, fees to physicians in the smallest rural counties (population < 25,000) will be, on average, 27 percent higher than they would have been under the former payment system. Overall, the move to a national resource-based fee schedule, with adjustments made only for differences in costs across geographic areas, significantly reduces the variation in fees throughout the country. Whereas under the former payment system three- and fourfold differences in charges for certain services were common, under the Medicare Fee Schedule, the geographic adjustment factor is much more compressed, ranging from 0.89 to 1.18 for the average service.

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[3] Marder found that new physicians have a strong incentive to locate where there is high variation in incomes—that is, major metropolitan areas. A large percentage of turnover occurs five to seven years later as those whose earnings are below their expectations begin to look for a new practice location, typically a smaller town where income is more predictable. It is at this point that Marder suggests payment incentives might prove meaningful.

The Medicare Fee Schedule creates parity in fees across geographic areas, removing historic inequities and reflecting only differences in an index of costs; however, the Medicare bonus payment continues to serve a purpose. Despite the achievement of neutrality in Medicare fees, there continue to be other factors, as mentioned above, that deter physicians from practicing in underserved areas. In addition, underserved areas tend to contain a large proportion of people who are uninsured or covered by Medicaid, which may make it more difficult to maintain a viable practice. The Medicare bonus payment can potentially serve to compensate for such drawbacks, adding an incentive that is needed to encourage practice in these areas.

The research suggests that the strength of the bonus payment lies in its ability to retain physicians in underserved areas. For many physicians, the additional income earned under the Medicare bonus program is modest. A 10 percent bonus applied to all Medicare receipts of the typical physician will increase his or her total gross revenues by only 2.3 percent.[4] The bonus payment's effect on net income is more prominent. For physicians such as family practitioners whose expenses are generally more than half of gross revenues, the bonus will increase net income by more than 5 percent, on average.

The actual amount of bonus dollars the typical physician might receive in a year is $2,390, based on the most recent quarter for which data are available (Table 5-1). For physicians operating a financially marginal practice, this extra Medicare revenue may be enough to convince them to remain in the community. In addition to increasing their income, the bonus payment also signifies to these practitioners the importance the federal government places on their willingness to practice in an underserved area.

The Commission maintains that payment policies such as the Medicare Fee Schedule and the bonus payment, in conjunction with other efforts, such as the National Health Service Corps, will increase access to physician services. As the fee schedule is phased in and as increasing numbers of physicians take advantage of the bonus payment, it will be important to assess the true effects of these changes on the distribution of physicians and beneficiary access to their services. The Commission's ongoing efforts to monitor access to physician care for vulnerable Medicare populations will assist it in this work (see Chapter 3).

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[4] On average, Medicare's payments to physicians total 23 percent of physicians' gross revenues (U.S. Congress 1991), although this percentage is typically higher for physicians in rural areas where there is a greater concentration of elderly than in urban areas. This percentage does not reflect the deductible and coinsurance amounts and balance bills paid by beneficiaries, to which the bonus payment is not applied.

Table 5-1. Health Professional Shortage Area Bonus Payments

Quarter	Total Bonus Payments	Number of Physicians Receiving Payments	Annualized Payment Per Physician
January-March 1989	$ 80,864	2,528	$ 127.96
April-June 1989	424,777	2,936	578.72
July-September 1989	680,284	3,407	798.68
October-December 1989	766,142	4,294	713.68
January-March 1990	752,633	4,174	721.24
April-June 1990	1,028,547	5,505	747.36
July-September 1990	1,150,829	5,765	798.48
October-December 1990	1,128,997	5,522	817.80
January-March 1991	2,475,172	9,005	1,099.48
April-June 1991	6,435,560	15,454	1,665.72
July-September 1991	9,795,248	18,958	2,066.72
October-December 1991	12,894,468	21,577	2,390.40

Source: HHS 1992.

Note: The large jump in expenditures from 1990 to 1991 reflects in part the legislative change that qualified physicians in urban HPSAs and all rural HPSAs to receive the bonus payment.

The annualized payment per physician is the quarterly average payment multiplied by four.

DISTRIBUTION OF THE MEDICARE BONUS PAYMENT

An integral part of Medicare's bonus payment policy is the ability to distribute the bonuses in a way that optimizes their effectiveness. Currently, bonus payments are provided to any physician who delivers a service in a primary care Health Professional Shortage Area as designated by the Department of Health and Human Services (HHS). HHS originally designed the HPSA criteria to select placement sites for National Health Service Corps personnel. Since then, HPSA status has been linked to other federal programs, including funding for health professions training, Area Health Education Centers, and Rural Health Clinics.

Although the HPSA designation suits the purposes of most of these programs, particularly the NHSC (HHS 1983), some have suggested that HPSAs may not be the most appropriate basis for distributing Medicare bonuses. This section examines the HPSA criteria, detailing the standards an area must meet to qualify as well as presenting some of the common criticisms of HPSAs. Recommendations for improving the distribution of bonus payments that build on the current use of HPSAs are then presented.

Federal Regulations on HPSA Designation

HPSAs are rural and urban areas, population groups, and facilities that are deemed to lack a sufficient supply of physicians. The federal government began designating these shortage areas in 1971 based on criteria established by regulation. Each year, HHS's Office of Shortage Designation, using data available at the national level, prepares a list of current and potential HPSAs and distributes this to the states for comments and recommendations. Taking into consideration any information it receives, HHS renews or withdraws designations and issues new ones. In addition, there is a process by which an individual or agency can request that an area be considered for HPSA status. Once an area qualifies as a HPSA, it maintains this status for three years before it is subject to another review.

The criteria used to designate HPSAs have changed over the years, as have the types of HPSAs. Currently, HPSAs are designated for only three groups of professionals: dentists, psychiatrists, and primary care physicians.[5] Primary care HPSAs constitute by far the majority of HPSAs. As of June 1991, there were 2,082 primary care HPSAs, including geographic areas, population groups, and facilities in both rural and urban locations. The discussion that follows pertains only to geographic primary care HPSAs, of which 70 percent are located in rural parts of the country.

The Three Essential Criteria. To be designated as a primary care HPSA, an area must meet the following criteria:

- It is a "rational" area for the delivery of primary medical care services, including counties, census tracts, towns, and census county divisions;

- It has a population-to-primary care physician ratio of greater than 3,500:1, or between 3,500:1 and 3,000:1 if the area has an unusually high need for primary care[6] or insufficient capacity of existing practitioners;[7]

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[5] Primary care physicians are defined as doctors of medicine and osteopathy in the specialties of family/general practice, general pediatrics, obstetrics/gynecology, and general internal medicine (*Federal Register* 1980).

[6] Unusually high need is defined as more than 100 births per year per 1,000 women aged 15 to 44; more than 20 infant deaths per 1,000 live births; or more than 20 percent of the population with incomes below the poverty level.

[7] Insufficient capacity is defined as existence of at least two of the following: more than 8,000 office or outpatient visits per year per primary care physician; appointment backlogs of more than seven days for established patients or 14 days for new patients; office waits of more than one hour for scheduled patients or more than two hours for unscheduled patients; excessive use of the emergency room for primary care; more than two-thirds of area physicians do not accept new patients; or two or fewer office visits per year per area resident.

- The primary medical care manpower in contiguous areas is overutilized (population-to-primary care physician ratio is greater than 2,000:1); excessively distant (more than 30 minutes travel time away); or inaccessible to the population of the area under consideration (due to, for example, differences in socioeconomic characteristics between the area under consideration and the contiguous area) (*Federal Register* 1980).

Adjustments to Population and Physician Counts. There are specific instructions pertaining to the population and physician counts that compose the population-to-physician ratio. For the population count, adjustments are made to account for seasonal residents, tourists, and migrant workers as well as differences in the health services required by those of different ages and gender. For the physician count, there are a number of exclusions: physicians engaged in teaching, research, and administration; international medical graduates (IMGs) who are not citizens or lawful permanent residents of the United States; hospital staff physicians providing only inpatient care; emergency room physicians; and physicians suspended from Medicare and Medicaid under the Anti-Fraud and Abuse Amendments for a period of 18 months or more. Furthermore, full-time equivalency (FTE) measures are used to account for interns and residents (0.1 FTE); IMGs who practice with a restricted license (0.5 FTE); and semiretired or part-time physicians who work fewer than 40 hours per week (FTE based on hours worked) (*Federal Register* 1980).

Criticisms of the HPSA Criteria

The criteria employed in designating HPSAs have been intensely scrutinized since their development in the early 1970s. Early critics faulted the HPSA designation for its overreliance on population-to-physician ratios. They claimed that dependence on this ratio obscured other factors that have bearing on the determination of physician supply needs. Changes made to the criteria in 1980 have subsequently allowed for a population's demand and need for health services (as measured by insufficient capacity and unusually high need indicators, listed above) to be taken into account.

Still others have noted that although HPSA criteria perform well in measuring physician availability, the criteria are not as effective at predicting levels of access. Several researchers have found that the rate of physician contacts does not differ significantly among HPSAs and non-HPSAs (Chiu 1981; Kehrer and Wooldridge 1983). In one study where a difference in utilization rates was found, results of a multivariate regression showed that the difference was more closely associated with income, race, health status, and insurance coverage than residence in a HPSA (Berk et al. 1983). In other words, the mere presence of physicians is not sufficient to ensure that people have access to care. As the study by Berk and others implies, lack of health insurance may hinder one's ability to obtain care regardless of the proximity of physicians.

For Medicare beneficiaries who by definition have adequate insurance coverage, however, the more relevant concern is physician availability. The primary objective of the bonus payment is to improve physician availability in underserved areas. Thus, the fact that HPSA criteria fail to measure access in its broadest sense may be less relevant to the distribution of the bonus payment.

A drawback of HPSAs that is particularly pertinent to the bonus payment policy is the instability of the designation. When shortage areas are periodically reassessed, an addition of even one physician may reduce the population-to-physician ratio enough to disqualify an area. Although withdrawal of a designation could be a legitimate indication that an area is self-sufficient, it may be that retention of physicians in that community is dependent on the HPSA bonus payment. Indeed, the Office of Technology Assessment reports at least one incidence in which a physician left an area because the designation and, thus, the bonus was withdrawn (U.S. Congress 1990).

A related concern is that because the HPSA designation is based on the current supply of physicians in an area, the criteria cannot capture those areas that are susceptible to shortages and yet presently have an adequate number of physicians. As a result, such areas cannot qualify for the bonus despite being vulnerable in terms of the stability of their physician supply.

Modifications to the Current Method of Distributing Bonus Payments

The Commission recommends two approaches to improve the distribution of Medicare bonus payments that address the concerns outlined above. First, Medicare should continue to provide bonus payments in areas for a period of time beyond when they are withdrawn from the list of HPSAs. Second, criteria should be developed to designate counties based on the inherent characteristics of an area that deter physicians from practicing there.

Extension of HPSA Status. To counteract the instability of bonus payment distribution in areas that are currently HPSAs, a grace period should be established so that areas withdrawn by HHS will continue to qualify for these payments. Although the total number of geographic HPSAs has remained fairly stable in recent years, ranging from 1,586 in 1988 to 1,693 in 1991, there is notable turnover every year. In 1990, for example, some 80 counties and 90 subcounty areas were withdrawn from the list of HPSAs (*Federal Register* 1990). Nine counties and 12 subcounty areas lost their designation in 1991 (*Federal Register* 1991).

Because HPSAs are reviewed every three years, it would be fairly straightforward for Medicare to extend the bonus payment to physicians in these areas for an additional three years until their subsequent review.[8]

Designation of Additional Areas Eligible for the Bonus. HPSAs do well in identifying where there are current shortages of physicians; however, the Commission is concerned that there are some communities prone to shortages that the HPSA criteria fail to identify. One way to address this is to designate underserved areas based on their innate unattractiveness to physicians. This could also further alleviate the instability problem. Two area characteristics that appear to affect physician supply and for which national data exist are poverty and population density. Commission staff analyzed both attributes and determined that poverty is a more powerful predictor of physician supply than is population density. This analysis was limited to rural counties; the Commission plans to explore options to improve the distribution of bonus payments in urban areas in the future.

The Urban Institute first pursued the idea of designating counties on the basis of their inherent difficulties in attracting and retaining physicians. Researchers there developed a proposal to eliminate the use of HPSAs and allocate the Medicare bonus payment to counties whose population density falls below 35 people per square mile. As noted in the Urban Institute report, the less densely populated an area is, presumably the greater is the distance to urban amenities and professional resources (Welch and Zuckerman 1991). Yet, in many ways, a measure of density has little meaning if population distribution is not also taken into account. For example, a county whose population is clustered in a small town would find it much easier to attract a physician than would a county with a similar measure of density but a more dispersed population (U.S. Congress 1989).

The theoretical case for designating shortage areas based on poverty appears more compelling. Use of poverty is consistent with the notion that physicians are less willing to practice in poor areas because they typically contain a disproportionate share of Medicaid and uninsured patients. Furthermore, studies have found that population density does not differentiate very well between levels of physician supply whereas the relationship between poverty and physician supply is reasonably strong (Ernst and Yett 1985).

Commission staff tested both population density and poverty — as measured by the percentage of the population falling under the federal poverty line — to determine their relationship to population-to-primary care physician ratios for nonmetropolitan counties.[9] The analysis shows that poverty is more highly correlated with primary care physician supply than is density (for density, r = 0.19; for poverty, r = -0.27). In fact, combining density data with poverty data explains only slightly more of the variation in physician supply than poverty by itself.[10]

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[8] The Office of Technology Assessment recommended that a grace period of two years be allowed before withdrawing an area's HPSA status (U.S. Congress 1990).

Generally, physician supply ratios show less variation within categories of poverty than within categories of population density (Table 5-2). On average, the poorest counties — those with poverty rates exceeding 25 percent — have 3,000 to 3,500 people per primary care physician, regardless of population density. (Counties in the highest category of density — more than 50 people per square mile — seem to fare much better than other counties, with about 2,200 people per physician in the high poverty category.)

Table 5-2. Population-to-Primary Care Physician Ratios in Rural Counties, 1989

Population Density, 1988 (Persons Per Square Mile)	Percentage of Population Living in Poverty, 1989				
	≤10	10 - 15	15 - 20	20 - 25	>25
≤10	2399:1	2338:1	2387:1	2831:1	3331:1
10 - 20	1816:1	2251:1	2716:1	2738:1	3556:1
20 - 30	2252:1	2380:1	2961:1	3499:1	3306:1
30 - 40	2485:1	2090:1	2920:1	2769:1	2925:1
40 - 50	2040:1	2170:1	2574:1	2434:1	2960:1
>50	1752:1	2059:1	2138:1	2070:1	2243:1

Source: PPRC analysis of Area Resource File data, 1992.

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[9] Primary care physicians were defined as office-based, patient-care general and family practitioners, pediatricians, obstetrician/gynecologists, and internists. To compensate for the instability of physician supply over time, staff used an average of the population-to-primary care physician ratios in 1975, 1979, 1985, and 1989. Population density for 1988 and poverty rates for 1989 were used. All variables were drawn from the March 1991 Area Resource File, with the exception of poverty data, which were projected from Census data by the National Planning Data Corporation.

[10] In a regression analysis, for density alone, $R^2 = 0.038$ and for poverty alone, $R^2 = 0.072$. When both poverty and density are included, $R^2 = 0.095$. Variations on this model were tested for nonlinear and multiplicative relationships; none substantially increased the predictive power of the equation.

This analysis leads the Commission to recommend that nonmetropolitan counties exceeding a poverty rate of 25 percent should qualify for the Medicare bonus payment based solely on their poverty status.[11] Instead of replacing HPSAs, they should supplement the currently designated shortage areas. Counties meeting this criterion would serve primarily as a "safety net" to ensure that areas without the economic base to support, over time, the number of physicians currently practicing there would qualify for the bonus regardless of their HPSA status. Such a policy would make the bonus payment a more effective tool for physician retention.

Based on 1989 data, a policy that makes nonmetropolitan counties with poverty rates above 25 percent eligible for the bonus would add 131 counties that are currently non-HPSAs. Most of these counties are concentrated in the southeastern and southwestern regions of the country. The proposed policy would also qualify for the bonus 87 counties that now contain only subcounty HPSAs (Table 5-3).[12]

Expanding the number of counties eligible for the bonus incentive to include counties above the 25 percent poverty threshold would increase the number of rural beneficiaries living in eligible counties by approximately 27 percent.[13] To obtain a rough cost estimate, an annualized amount of the most recent quarter (October-December 1991) of bonus payment outlays in rural areas was calculated and multiplied by 27 percent. The result suggests a $6.9 million increase in bonus payment outlays for this hypothetical year.

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[11] A policy that included only counties with poverty rates above 25 percent *and* with 50 or fewer persons per square mile would be more consistent with the results of the analysis; however, taking into account density would add another layer of administrative complexity.

[12] Subcounty rural HPSAs are defined in terms of towns, townships, minor civil divisions, census county divisions, enumeration districts, and magistral districts. Commission staff estimated that for rural counties containing subcounty HPSAs, roughly one quarter of the county's population resides within the HPSA.

[13] Estimates were also calculated for poverty thresholds of 20 percent and 30 percent. A 20 percent poverty threshold would increase the number of rural beneficiaries living in eligible counties by 67 percent; a 30 percent threshold would add only 13 percent more beneficiaries.

Table 5-3. Rural Counties with a Poverty Rate of More than 25 Percent, by Current HPSA Status, December 1989

State	Whole HPSA	Partial HPSA	Non-HPSA
South Atlantic			
Georgia	17	4	18
Florida	3	3	0
North Carolina	8	4	2
South Carolina	10	4	1
Virginia	0	0	1
West Virginia	8	2	1
East South Central			
Alabama	12	3	7
Kentucky	20	11	19
Mississippi	28	4	22
Tennessee	15	0	1
West South Central			
Arkansas	10	8	5
Louisiana	18	6	10
Oklahoma	3	2	6
Texas	20	4	21
East North Central			
Illinois	0	2	0
Ohio	1	0	0
West North Central			
Iowa	0	0	2
Missouri	11	1	2
Nebraska	0	3	2
North Dakota	5	2	2
South Dakota	6	11	5
Mountain			
Arizona	0	2	0
Colorado	4	0	1
Idaho	1	2	0
Montana	7	0	2
New Mexico	3	8	1
Utah	0	1	0
TOTAL COUNTIES	**210**	**87**	**131**

Source: PPRC analysis of Area Resource File data, 1992.

Note: States not listed had no rural counties with poverty rates greater than 25 percent.

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CHAPTER 6

IMPROVING ACCESS UNDER MEDICAID

Medicaid is the principal source of health care financing for low-income and medically indigent Americans. Jointly funded by the states and the federal government, the program serves several distinct low-income populations: families with dependent children; the elderly; and the mentally, physically, and developmentally disabled. A series of eligibility expansions enacted during the late 1980s made Medicaid benefits available to a substantial number of low-income pregnant women and children by broadening Medicaid eligibility to persons not receiving cash welfare assistance.

Since its inception in 1965, Medicaid has substantially improved access to physicians' services for its beneficiaries. Before its introduction, many of the poor often went without care. By the late 1970s, however, Medicaid beneficiaries used physicians' services at the same rate as the general population (Davis and Schoen 1978). Despite these successes, troubling barriers to care still exist for Medicaid beneficiaries. Compared to persons with other sources of insurance, Medicaid beneficiaries are more likely to have a hospital outpatient department or emergency room as their regular source of care, have longer travel times to their regular provider, and wait longer for care (Cornelius et al. 1991). They are also less likely to have adequate prenatal care and to receive major surgical procedures (GAO 1987; Wenneker et al. 1990). These differentials are especially worrisome because Medicaid beneficiaries are generally in poorer health.

In its report on physician payment under Medicaid submitted to the Congress last July, the Commission supported the principle that Medicaid beneficiaries should have access to care comparable to that experienced by Medicare beneficiaries. Noting that the goal of access to mainstream medical care would remain elusive as long as physician fees paid by state Medicaid programs are substantially below those paid by Medicare and other payers, it stressed the necessity of raising Medicaid fees to Medicare levels (PPRC 1991).

The Commission continues to believe that increases in Medicaid fees are imperative. But it has also noted that because factors other than fees affect the willingness of physicians to participate in the Medicaid program, beneficiaries in some geographic areas, particularly inner-city and rural settings, may remain underserved even under the most generous fee increases. A multipronged strategy, including both fee increases and other service delivery mechanisms, is needed to achieve improved access to medical care for Medicaid beneficiaries.

The first two sections of this chapter consider two such service delivery mechanisms for improving access: expanding federal support to alternative delivery systems located in communities where Medicaid beneficiaries live and encouraging managed care. These options were raised by the Commission in its earlier work and are developed more fully here. The chapter concludes with a progress report on the Commission's continuing analysis of Medicaid physician fees and the potential of fee increases to improve physician participation and access to care for Medicaid beneficiaries.

ALTERNATIVE DELIVERY SYSTEMS

Community health centers, hospitals committed to primary care, and schools have considerable potential for improving access to care for Medicaid beneficiaries but will require increased federal support to fulfill this goal.

RECOMMENDATION

Federal funding for community health centers should be substantially expanded to fund new sites in underserved areas and expand the capacity of existing centers. Additional federal support should be extended to increase the provision of primary care services by hospitals and schools.

Other barriers must also be addressed in order for these providers to reach their full potential. Policies that could diminish these barriers include expanding the number of health professionals in the National Health Service Corps (NHSC), ensuring availability of liability coverage at reasonable rates, eliminating discrimination in granting of hospital admitting privileges, and scrutinizing restrictions on nonphysician practitioners.

This section takes a closer look at the role community health centers, hospitals, and schools currently play in serving the Medicaid population, their future potential and barriers to expansion. Historically these institutions have differed substantially in delivering medical care; today they face common issues. All are now serving Medicaid beneficiaries in both rural and urban communities. All are potentially suited to provide an expanded package of medical and social services to meet this population's extraordinary needs. Most importantly, all lack sufficient financing to care for a population that is overwhelmingly uninsured or underinsured. In fact, even if Medicaid enrollment were more stable and the Medicaid program paid more generously, other subsidies to these providers would continue to be needed to underwrite the costs of serving the uninsured.

Community Health Centers

Approximately 550 public and private nonprofit organizations currently receive federal grants under Sections 329 and 330 of the Public Health Service Act to operate community and migrant health centers (C/MHCs) providing a wide range of health and other social support services. About 1,400 clinics are supported through these grants, ranging in size from small, single-physician practices to centers with patient caseloads up to 60,000. All are located in underserved areas, 60 percent in rural communities and the remainder in high-poverty urban areas. Approximately 6 million Americans, a population that is overwhelmingly either uninsured or publicly insured, receive care from these providers.

To receive federal grants, community health centers must meet a number of criteria related to governance, clinical services, administrative and financial operations, and community need. Specifically, community health centers must:

- be operated by a community-based governing board with a majority of board members who are active users of the center's services;

- have an organized system for delivering basic primary care services, tailored to the population at risk, that includes an appropriate number and mix of health professionals with hospital admitting privileges;

- have adequate systems of management information, communications, and finance that allow for provision of services in a cost-effective manner as well as for an annual independent audit; and

- be located in areas with a significant number of persons at or below the poverty level and who are medically underserved (U.S. Public Health Service undated).

This program has the potential to serve more Medicaid beneficiaries if given increased federal support. First, as noted above, C/MHCs are located in areas that are medically underserved. Second, they are experienced in serving a population that is overwhelmingly poor, minority and either uninsured or publicly insured. They can develop programs and services that meet the Medicaid population's special medical and social needs. And third, they have established a track record of success in improving health status and access to care. Evaluations conducted during the 1970s documented the impact of community health centers in increasing access to services such as prenatal care, immunizations and other preventive services as well reducing emergency room use, hospitalization rates and lengths of stay (National Association of Community Health Centers 1990).

Insufficient grant funding to start up centers and subsidize their operations is the major obstacle to an expanded C/MHC program. The Advisory Council on Social Security (often referred to as the Steelman Commission) recently recommended that $250 million in new funding be made available to establish 250 of these centers (Advisory Council on Social

Security 1991).[1] There are other barriers as well. Among them are a shortage of professionals willing to staff centers, the rising cost of liability insurance premiums, and access to hospital facilities. These issues are discussed below.

Funding Issues. Insufficient funding limits the potential of community health centers to serve more Medicaid beneficiaries in two ways. First, there simply are not enough grant dollars to both support existing grantees and make commitments to supporting new centers. When the availability of grants for new starts and expansions of existing programs was announced in fiscal year 1991, 116 applications were received, but only 14 awards made (Hausknecht 1991).[2] Second, although provisions of the Omnibus Budget Reconciliation Acts of 1989 and 1990 (OBRA89 and OBRA90) will increase Medicaid revenues to community health centers, these providers will continue to require operating subsidies to support care for the uninsured.

Funding for New Starts. As with other federal health resources programs, funding for community health centers was cut back substantially during the early 1980s. By 1984 this trend reversed, and annual appropriations have since increased gradually (Congressional Research Service 1991). Even so, funding remains insufficient to award grants for new starts. Last year (fiscal year 1991), only a few new starts were awarded. In fiscal year 1992, $527.2 million was appropriated, a 10 percent increase over fiscal year 1991. This will permit the awarding of 60 to 70 grants, half for new starts and half for expansion of existing centers (Hausknecht 1991).

Funding for Daily Operations. Federal grants provide only about half of C/MHCs' support. The balance comes from patient fees that are based on ability to pay; public and private insurance; and state, local, and other contributions. Medicaid accounted for about 20 percent of C/MHC revenues in 1989 (Lewis-Idema 1990).

In the past, state Medicaid programs enrolled community health centers as providers and paid for their services under a variety of arrangements. Some centers were enrolled as freestanding clinics, and others as physician groups.[3] Under either enrollment method, payment was based on either fee-for-service or flat encounter rates determined by historical costs. Like Medicaid hospital payments, these payments were often well below the costs of providing care.

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[1] Assuming that new centers have a similar client mix to existing C/MHCs, this funding would support services to about 4 million of the some 12 million Americans living in areas without primary care providers (Advisory Council on Social Security 1991).

[2] Of the 102 applications denied funding, 40 would have been funded had there been additional money; 59 did not meet program criteria. Three applications were funded under other mechanisms (Bohrer 1992).

[3] Under the federal Medicaid statute, clinic services are those provided by an outpatient facility that is not part of a hospital. Although these services must be furnished by or under the direction of a physician, the clinic itself need not be administered by a physician. States generally pay clinics under different rules than those for physicians.

Congress responded to calls for Medicaid to pay its fair share for C/MHC services in OBRA89; any center receiving a federal grant may now be designated as a federally qualified health center (FQHC) and receive 100 percent of reasonable cost payment for services provided to Medicaid patients.[4] Other freestanding ambulatory care entities that meet the criteria under Section 330 but do not currently receive federal funding can be designated as FQHCs. These look-alikes include centers that have applied for Section 330 grants in the past but have not received them due to insufficient program funding. They also include centers operated by public agencies that, as mentioned below, are considered separately from private entities.

The designation of FQHCs is significant for two reasons. First, reasonable cost payment is expected to result in more Medicaid dollars flowing to community health centers. Estimates by the National Association of Community Health Centers suggest that Medicaid revenues to these centers will increase by about 22 percent due to the FQHC legislation (Lewis-Idema 1991). It is unclear, however, whether higher Medicaid funding alone will be sufficient to ensure financial solvency if community health centers continue to bear the burden of caring for the uninsured.

Second, the look-alike provision is expected to increase substantially the number of entities receiving higher Medicaid payments. As of December 1, 1991, look-alike status had been approved for 56 such centers. Applications had been disapproved for 23 centers that failed to meet various program criteria such as having at least half of the primary care staff physicians working for the center fulltime, having a sound financial and management system with provision for annual independent audit, and having a governing board composed of center users (Trower 1991).

One way to provide more federal support for community health centers would be to relax the criteria used in awarding federal grants or in granting FQHC status. Waiving some of the Public Health Service's requirements related to staffing, providing core services, and having appropriate management systems could enhance the financial footing of some health centers located in underserved areas that might otherwise close. For example, the National Commission on AIDS recently recommended that FQHC status be extended to community clinics funded under the Ryan White CARE Act that do not meet all of the Section 330 criteria (National Commission on AIDS 1991). In fact, time-limited waivers are already granted on a case-by-case basis to centers that have a plan for achieving certain program criteria. Seed grants, or more expansive waivers to help such centers "come up to code", may be warranted.

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[4] OBRA90 extended reasonable cost payment to FQHCs for services provided to Medicare beneficiaries effective October 1, 1991.

Easing administrative barriers, however, might mean sacrificing the quality of care and facility management and may not be in the best interest of Medicaid beneficiaries. For example, centers must now provide comprehensive services, including those of physicians and mid-level practitioners, diagnostic laboratory and X-ray, and case management; they may provide pharmacy, preventive dental, emergency services and transportation either through contract or other arrangement. Moreover, all centers must be open at least 32 hours per week as well as have an ongoing quality assurance program, and a sound management and control system with an annual audit by an independent licensed accountant.

Another alternative would be to eliminate the statutory provision prohibiting more than 5 percent of Section 330 grant dollars being used for centers operated by public agencies. This provision restricts federal support to state and local health department clinics, historically an important source of primary care services (particularly for women and children) in some communities. On the other hand, removing the 5 percent limit could move the C/MHC program away from its origin in the neighborhood health centers movement. Since the 1960s, community residents have played an integral role in overseeing center operations and developing programs to meet unique local needs. Many advocates believe that strong grass roots and links to the community are the program's greatest strength. Expansion of other funding mechanisms may be needed to both ensure the integrity of the community health centers program and expand the capacity of health department clinics.

Availability of Staff Physicians. As mentioned above, community health centers must have half of their primary care physicians working fulltime, be open at least 32 hours per week and provide professional coverage during other hours. Centers are also required to show that they have a sufficient number of physicians, meaning no more than 6,000 visits annually or 2,000 users per physician.

Because community health centers cannot offer competitive salaries and are often located in undesirable areas, they have traditionally relied heavily on staff physicians who are fulfilling National Health Service Corps obligations. Historically, about half of the physicians working in C/MHCs have been supplied by the Corps (GAO 1990).

The decline in funding for the NHSC during the 1980s has made it even harder for C/MHCs to find enough staff physicians. Between 1985 and 1990, the number of health professionals available annually from the NHSC declined from a high of 1,600 to about 135.[5] At the end of this period, the National Association of Community Health Centers reported 800 vacancies for physicians among its members (GAO 1990).

As noted in Chapter 5, the number of physicians with service obligations will likely increase under a new loan repayment program created to revitalize the Corps. Under this program, the Public Health Service repays educational loans for people agreeing to work in underserved areas for a minimum of two years. For each year of service, the program pays up to $35,000, with a maximum payment of $140,000 for a four-year commitment. Although the loan repayment initiative has great potential to increase the number of physicians available to community health centers, appropriations have been limited; far more applications have been received than can be funded (GAO 1990).[6] The Commission has stressed the importance of further expansions in the Corps (see Chapter 5).

Availability of Professional Liability Insurance. The increasing cost of professional liability insurance also troubles community health centers. Over the past decade, professional liability insurance costs for community health centers have quadrupled. And in the past year alone, some centers' premiums have risen by 30 to 40 percent, far faster than the rate of increase in federal grants (Pear 1991). By contrast, premiums for physicians have recently leveled off or declined slightly.

Unlike some other providers, community health centers have no cushion to absorb such increases. They also have limited ability to pass them on to their patients: the more money paid on premiums, the less that is available for patient care. Consequently, some centers are cutting back services, including procedures considered most likely to generate claims such as obstetrical services (recently discontinued at several clinics in Florida) and extras such as evening hours at community health centers in Rhode Island. Overall, the National Association of Community Health Centers estimates that its members could serve 500,000 additional patients with the money now spent on insurance premiums (Pear 1991).

It is unclear why malpractice premiums have been rising so rapidly, particularly since many community health centers have never paid a malpractice claim (Pear 1991). The General Accounting Office (GAO) is currently conducting a survey of community and migrant health centers to document the increase in premiums, claims experience, and any instances of centers being redlined by insurers judging them to be poor risks. The Commission will review the findings of this study when it is completed in mid-1992.

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[5] Not all of these professionals will be placed in community health centers. NHSC physicians may also fulfill their obligation by working for the Indian Health Service and the Federal Bureau of Prisons.

[6] In fiscal year 1991, the NHSC was funded at $91.1 million. Only 160 of the 375 new applicants for loan repayment were funded.

A number of policy options have been suggested for providing malpractice relief to community health centers. Legislation (H.R. 3591) has been introduced by U.S. Representatives Ron Wyden and Nancy Johnson to provide protection to health center employees under the Federal Tort Claims Act as is already done for physicians under contract to the Indian Health Service. If this were enacted, health center employees would be represented in malpractice actions by attorneys from the Justice Department and any claims resulting from negligence would be paid from the federal treasury. The Justice Department, however, has opposed this approach, asserting that the federal government should not accept financial responsibility for day-to-day activities that it does not control or supervise. Alternatives include developing a self-insurance mechanism for all federally funded community health centers, or having the federal government act as insurer while taking a more active role in supervising physicians, conducting record reviews, and monitoring quality (Pear 1991).

Access to Hospital Services. Another factor that limits the ability of community health centers to provide comprehensive primary care services is access to hospital privileges for center staff. Anecdotal evidence suggests that some hospitals will not grant privileges to community health center staff because their patients are either uninsured or on Medicaid. The GAO is surveying community health centers to determine the extent of this type of economic credentialing and its impact on patient care, and plans to issue a report in mid-1992. The Commission hopes to learn more about this problem from the GAO's work.

Hospitals are barred under the Public Health Service Act from denying admitting privileges to NHSC physicians who meet professional qualifications; those that violate the law stand to lose Medicare and Medicaid payments. It may be appropriate to change the statute to cover other health professionals employed by community health centers as well.

Hospitals

As with community health centers, there are several reasons why hospitals may be a suitable base for expanding access to care for Medicaid beneficiaries. First, hospitals already have an infrastructure for providing medical services. They are open 24 hours a day and have facilities such as laboratories and X-ray, systems for billing, and medical records systems. In addition to supporting a critical mass of health professionals, hospitals can recruit physicians to underserved areas by providing an adequate financial base, an appropriate physical practice setting, and opportunities for professional interaction and education (Vladeck 1990).

Even more importantly, hospitals are de facto already in the business of providing primary care services to the Medicaid population and to other residents of underserved areas. As the Commission noted in its Medicaid report (PPRC 1991), Medicaid beneficiaries who lack relationships with office-based physicians often use hospital outpatient departments and emergency rooms as their regular source of care. Although all hospitals are legally bound to provide some assistance to those arriving on their door step, public hospitals have an even greater responsibility due to funding from municipal, county or state governments.

In response to the demand for primary care services by Medicaid beneficiaries and the uninsured, some hospitals are developing programs to serve community needs along a continuum of health and social support services. These programs include interventions addressing teen-age pregnancy, drug abuse, homelessness, and violence as well as programs to prevent disease,coordinate services, and improve transportation. Harlem Hospital in New York City runs a childhood injury prevention program targeted at reducing home and playground accidents that frequently result in emergency room and trauma center use. Regional Medical Center in Memphis has begun a program to follow teen-age mothers and their infants over a two-year period beginning with prenatal care (Matherlee and Jones 1991).

Hospitals have adopted two different models for delivering primary care services. First, some, like Parkland Memorial Hospital in Dallas, are directly providing services. Parkland's community-oriented primary care program supports a seven-clinic network in the city's poorer neighborhoods that is funded through a combination of county taxes and 30 separate categorical funding sources.[7] Physicians working at these sites are granted faculty status by the University of Texas Southwestern Medical Center and provide coverage for Parkland's inpatient units. Health outcome objectives are identified jointly by each center's staff and the community, tracked through the hospital's management information system, and serve as the basis for incentive pay to physicians (Smith et al. undated).[8] In the program's pilot phase in West Dallas, hospitalization of children, infant mortality, and teen-age pregnancies all dropped dramatically (Pallarito 1991).

Others, like Mount Sinai Hospital Medical Center, a 469-bed tertiary care center in Chicago, are facilitating community partnerships with other providers. Under Sinai's leadership, the Westside Health Partnership was created. This partnership has brought together four hospitals, health department clinics, community health centers, a faculty group practice plan, and more than 100 office-based physicians and community-based social service agencies. The purpose of this effort is to rationalize care, referral, and case management for 7,500 Medicaid beneficiaries living in six zip code areas. Operational only since April 1991, the program has so far resulted in formal referral arrangements among partnership providers, development of a physician recruitment plan, and design of a data system to track utilization and quality (Greenspan et al. 1991).

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[7] Parkland's clinics are not supported by Section 330 grants and do not have FQHC status because clinic users do not account for a majority of the board of trustees.

[8] Examples of health outcome objectives include reducing emergency room visits secondary to asthma complications by 5 percent and decreasing the incidence of influenza-related morbidity and mortality in the elderly by 5 percent.

While Parkland Memorial and the Westside Health Partnership illustrate the potential success of using hospitals as a base for expanding access to care, the lack of sufficient financing for ambulatory services prevents many institutions from making an expanded commitment to providing primary care to the underserved. Additional federal support in the form of grants or enhanced Medicaid payments appears needed to fund expansions of existing efforts and encourage additional institutions to start up programs. Further, because hospitals are organized and staffed to support intensive specialty services, they may have difficulty making the transition to a primary care focus.

Financing. The most significant constraint to hospitals serving as a base for expanded access to care is the bottom line. Many institutions located in communities most in need of primary care services are already straining under the costs of providing inpatient care to the poor and have few resources to invest in developing new programs (Vladeck 1990). These are institutions that typically have declining or already negative operating margins, a deteriorating physical plant, limited ability to finance capital improvements, and heavy reliance on medical residents to meet their service needs. A number have already closed critical but unprofitable services, particularly trauma and emergency departments.

The poor financial shape of many public hospitals, particularly in urban areas, is attributed to the large number of patients they treat who either have no insurance or are insured by Medicaid. In the late 1980s, Medicaid hospital payments relative to costs fell to 78 percent while Medicaid discharges and hospital costs increased. As a result, many hospitals are experiencing unprecedented revenue shortfalls (ProPAC 1991).

Shortfalls are not limited to inpatient services. Overall, public hospitals lose money on 75 percent of outpatient services because more than half of all outpatient visits are unsponsored; another 25 percent are paid (typically below cost) by Medicaid (Gage et al. 1991). Moreover, the disproportionate share adjustments under Medicare and Medicaid designed to compensate hospitals with a poor payer mix apply only to inpatient services (Gage et al. 1991). Even this support is threatened by continued budgetary pressures at the federal and state levels as well as the recent compromise on provider taxes that limits the percentage of Medicaid funds a state may designate for disproportionate share adjustments.

Under these conditions, increasing Medicaid payments to hospitals for both inpatient and outpatient services could make it easier for these institutions to support primary care efforts. Even so, they will continue to be burdened by the costs of serving the uninsured. Broader policy solutions are needed. Vladeck (1990) points to one such solution: state policies that subsidize uncompensated care in hospital-operated or affiliated outpatient settings through rate setting mechanisms. Another option is development of services to attract more commercially insured patients (Shortell et al. 1984). For example, Parkland Memorial has been successful in drawing privately insured patients to its centers of excellence in cardiac care and diabetes management (Pallarito 1991).

Hospital Mission and Governance. Although financing is the biggest impediment to more broad-based delivery of primary care services by hospitals, not all hospitals are equally well-suited to this role. Vladeck (1990) suggests that there are trade-offs between developing a system of primary care and providing first rate tertiary care services. The orientation and philosophy needed to resolve problems seen in primary care differ from that guiding care for severely ill patients. Different management systems are needed to provide continuous care and appropriate follow-up with an individual practitioner. Simply put, as currently staffed, most hospitals may not have the right people to do the job.

Governance may also affect hospitals' ability to meet community needs. Vladeck (1990) explains that hospitals are large, complicated institutions where decisions are made slowly through multiple layers of management. Effective primary care, by contrast, requires an intimate connection to patients and their families and being able to respond quickly to community needs.

Despite these obstacles, hospitals with creative managers and boards committed to community service have been able to establish and sustain primary care centers. Primary care satellites, for example, may support specialized services by generating referrals. And institutional size can be used as an asset. In some poor neighborhoods, hospitals may be the only organization with enough leverage to mobilize people and develop services (Matherlee and Jones 1991).

Costs. Finally, one argument against expanding the role of hospitals in providing primary care services is that it is less expensive to provide care in freestanding clinics. In New York City, the cost of providing outpatient services in the hospital is 20 percent to 25 percent greater than in other settings (Vladeck 1990). This difference has been attributed to standby and overhead costs that hospitals incur as 24-hour-a-day, seven-days-a-week operations. It has also been suggested that costs may be higher in hospital outpatient departments because they often function as referral centers and therefore see patients who are sicker than those seen in community settings.

It is unclear, however, why primary care supervised or affiliated with the hospital but provided in smaller, less intensive settings is necessarily more expensive than care delivered in other community sites. First, the differentials cited above may be more a eflection of institutional practices for allocating overhead than the true costs of standby and overhead associated with providing primary care services. In an evaluation of a project funded by the Robert Wood Johnson Foundation in the 1970s to forge partnerships between community hospitals and primary care physicians, costs per visit at project sites in the community were lower than those reported in the emergency room and outpatient department. They were also roughly the same as those incurred by private practices (Shortell et al. 1984). Second, it is possible that linking primary care practices with hospitals rather than with community sites may actually be more efficient if there are economies of scale for ancillary services, such as laboratories.

Schools

Schools are being increasingly mentioned as a potential source of care for medically underserved communities, and the number of clinics linked to schools or based on site is growing steadily. The state of California recently launched a major program to develop comprehensive school health programs statewide, beginning with pilot projects in 100 local school districts. In Kentucky, health centers are now mandated in all junior and senior high schools in which 20 percent of children are eligible for federal programs supporting the educationally disadvantaged. In November 1990, a tax levy was approved by voters in Seattle to support a health center in every high school. The Steelman Commission has also recommended establishment of a nationwide, federally assisted system of health clinics located in or adjacent to elementary schools (Advisory Council on Social Security 1991).

There are several advantages to having schools serve as providers of medical care. First, schools, even more than community health centers and public hospitals, are located in both urban and rural communities that lack other health resources. Second, schools have a captive population six hours a day, five days a week. Third, most schools already provide some limited form of health services that could serve as building blocks for more comprehensive care.

The scope of current school health programs varies considerably. In New York City, there are no nurses in the public schools, while in Denver, a nurse or nurse practitioner is assigned to each site. Most schools hire registered nurses to ensure complete immunizations, screen for vision and hearing deficits, and refer children for medical care. To a lesser extent, school health programs provide sports physicals. In a very few school systems, employees include counselors, social workers, health educators, and substance abuse counselors (Lear et al. 1991).

Historically, school health programs have primarily focused on health screening and control of communicable diseases. The primary goal of these programs was to detect problems that might adversely affect healthy development as well as to intervene to help children achieve optimal learning (American Medical Association 1989; Lear et al. 1991).

Since the early 1970s, there has been an effort to develop comprehensive multidisciplinary health centers located on school grounds that extend services beyond screening and referral. Such centers provide hands-on medical care for acute and chronic conditions; preventive services including immunizations, health supervision, and hearing and vision testing; mental health services; family planning and prenatal care; dental services; substance abuse prevention; and nutrition education. In 1990, more than 160 such centers were in operation across the country. Some were operating under the aegis of the school system, others as units of a larger health care institution such as local health departments and community health centers (Center for Population Options 1990).

Even though there has been little systematic research on the effectiveness of comprehensive school-based centers in improving health outcomes, there is convincing evidence that they can improve access to care (OTA 1991). Data from the 23 health centers funded by the Robert Wood Johnson Foundation's School-Based Adolescent Health Care Program indicate that 20 percent of students using health centers had not received medical care in more than two years and 20 percent had no regular source of care. Notably, male students used services in the school more frequently than they used other community-based services. Because children often have difficulty in following upon referrals to outside sources, locating services on school grounds may be a critical factor in ensuring attention to medical problems (Lear et al. 1991).

Typically, school health programs are financed by multiple sources including state and local education agencies, maternal and child health block grants, federal Title XX dollars to support adolescent pregnancy programs, foundations, and third-party payers like Medicaid. The nature and extent of Medicaid support for such programs appears to vary widely across jurisdictions. In Baltimore, for example, school-based clinics are units of the city health department and are paid encounter rates based on historical costs. By contrast, the Atlanta school system has its own Medicaid provider number and is paid fee-for-service for services provided by nurses who float between elementary and secondary schools. In California, a new provider category was recently created for schools to ensure that all schools have access to Medicaid funds to finance health services.

Not all experiences with Medicaid are this positive, however. In some states, schools have been frustrated by the lack of clear administrative policy on enrollment of providers and payments for services provided in schools. And in 1989, five state Medicaid programs actually prohibited payment for health services delivered in schools, even when those services were provided by physicians (OTA 1991).[9]

Schools need technical assistance to negotiate the web of Medicaid rules and tap the dollars to which some of their students are entitled. But there are other obstacles that also prevent schools from achieving their full potential as a source of health care. These barriers, discussed below, include insufficient funding, restrictions on providers, and resistance by school officials and others in the community. There are also limits on the potential of schools to solve access problems for the entire Medicaid population.

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[9] It is unclear how such policies are consistent with the Health Care Financing Administration's Medicaid manual which indicates that schools may qualify as providers of either medical services or Early, Periodic Screening Diagnosis and Treatment (EPSDT). In fact, instructions to states on implementing EPSDT encourage the use of schools and other nontraditional sources as EPSDT sites.

Funding. Like community health centers and hospitals that take care of the underserved, school health programs have been limping along on a patchwork of funding sources that are not guaranteed from year to year.[10] As states struggle to balance budgets on declining revenues, school systems have little cushion to support programs not perceived as integral to their central goal of education.

Improving the ability of schools to use Medicaid dollars may make it easier for schools to provide a broader range of medical services. But the instability of the Medicaid population makes it difficult to count on a steady flow of revenues from this source; that is, a child may be Medicaid-eligible on one visit but may have gone off the rolls when seen for follow-up. Under these circumstances, continued dependence on public and private grants may be inevitable. Additional federal support is needed, in the form of grants or enhanced access to Medicaid payments. Alternatively, it may be desirable to guarantee eligibility for an extended period of time comparable to the policy that already guarantees eligibility for six months to Medicaid beneficiaries enrolled in federally qualified HMOs.

As in the case of community health centers, start-up funding is an issue of concern to school health programs. The Steelman Commission downplays this issue, indicating that most elementary schools already have a room in which health services can be delivered. The Robert Wood Johnson experience, in contrast, suggests that time (at least four to eight months) and initial funding are needed to renovate space; organize clinical services; negotiate relationships with school personnel; and introduce parents, students and teachers to the program (Lear et al. 1991).

Restrictions on Providers. School health programs have relied heavily on mid-level practitioners and registered nurses to provide hands-on care, with back-up support from physicians employed by health departments, hospitals, and community health centers. This kind of arrangement creates two different kinds of problems. First, in some states, school nurses have historically been constrained by school board directives from performing important health services. Second, restrictive Medicaid policies for payment to nonphysician practitioners have made it difficult for school health programs to bill for their services. This situation may have been somewhat mitigated by OBRA89 provisions that expanded payment to family and pediatric nurse practitioners, although there has been no formal evaluation of the new policy.

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[10] For example, The Door, a New York City agency widely regarded as a model integrated comprehensive service program, is supported by more than 80 sources, including federal, state, and local public agencies; private foundations; corporations; and individuals (OTA 1991).

Resistance by School Officials and Communities. Resistance to bringing health care services into the schools stems from two sources. First, many school officials are opposed to accepting responsibility beyond their traditional roles as educators. Schools are already being asked to provide a range of other social services, in many cases without sufficient funding to hire appropriately trained personnel. On the other hand, some of the most vocal advocates for school health programs are the principals of schools where clinics are located.

Second, many who associate school clinics with adolescent sexuality and family planning programs are opposed to providing contraceptives, prenatal care or other such services to teen-agers. The Steelman Commission skirted this issue by recommending a system of clinics based in elementary schools, presumably where sexuality need not be raised. Most school health programs have been able to overcome such resistance, however, by demonstrating that the majority of students come to school clinics seeking treatment for acute injuries and illnesses. In some cases, family planning services must be located elsewhere to secure parental acceptance.

Schools as a Partial Solution. Experiences of schools across the country, from rural southeast Georgia to inner-city Los Angeles, indicate that the obstacles discussed above can be overcome when there is dynamic leadership, foundation support, and political will. It is the Commission's view that schools have great potential for serving an important and growing segment of the Medicaid population. Other strategies must be pursued concurrently, however, to reach the rest of the Medicaid population including dropouts, parents, the disabled, and the elderly.

Conclusions

Alternative delivery systems are an important source of care for Medicaid beneficiaries living in underserved areas and should be supported as a part of a multipronged strategy to improve access. Increased federal support to community health centers, hospitals committed to primary care, and schools could substantially improve the ability of these providers to serve Medicaid beneficiaries. In particular, the Commission urges that funding for the community health centers program be substantially expanded to fund new sites in underserved areas and expand existing centers. Additional federal support should be extended to increase the provision of primary care services by hospitals and schools. For example, a new grant program may be appropriate to support expansions of existing efforts and encourage additional institutions to start-up programs. Improving Medicaid fees to these providers, comparable to the enhanced payment now received by federally qualified health centers, may also be warranted.

Other barriers noted above, while all secondary to financial considerations, must also be addressed in order for the alternative delivery systems to reach their full potential. These include expanding the number of health professionals in the National Health Service Corps, ensuring availability of liability coverage at reasonable rates, and scrutinizing restrictions on nonphysician practitioners.

Over the long term, increased support for alternative delivery systems must be pursued in tandem with a policy to raise Medicaid fees to Medicare levels to ensure that Medicaid beneficiaries have access to care comparable to that experienced by Medicare beneficiaries and other insured Americans.

MEDICAID MANAGED CARE

Another policy option with the potential to increase access to care for Medicaid beneficiaries involves expanding the use of managed care. For beneficiaries living in areas in which few private practitioners are available to serve them, a health maintenance organization (HMO) or primary care case manager that is willing to contract with a state Medicaid program to provide comprehensive services may be able to improve their access to care. To the degree that managed care can substitute office-based care for visits to the emergency room, Medicaid beneficiaries' medical problems could be addressed earlier; beneficiaries would also enjoy greater continuity of care.

Nevertheless, the potential for managed care to improve access for Medicaid beneficiaries is not always realized. When managed-care organizations are paid on the basis of capitation, they have financial incentives to underserve, especially in those states with low Medicaid capitation payments. The risk of underservice may be greater in this population compared with the general population because they appear to have less ability to "work the system." Mandating the use of managed care, or contracting with plans that specialize in serving Medicaid patients, increases these risks further. As a result, the federal government has placed a number of constraints on Medicaid programs' use of managed care.

Advances in quality assurance may permit managed care to play a larger role in Medicaid and succeed more often in realizing managed care's potential to improve access to care. The HMO industry has made significant strides in developing procedural, structural, and outcome standards to ensure quality. Recently, the Health Care Financing Administration (HCFA) initiated a major effort to ensure quality of care in Medicaid managed-care organizations. This effort is designed to upgrade Medicaid quality assurance processes and standards by clarifying the roles of managed-care organizations, state Medicaid programs, and HCFA in quality assurance; by specifying elements of the quality assurance process; and by adopting procedural, structural, and outcomes standards that have been developed by medical and governmental organizations. If these efforts are implemented successfully, removing some of the federal constraints on the use of managed care in Medicaid could be considered.

Although it is too early for the Commission to make a recommendation to remove federal constraints, it is encouraged by HCFA's quality assurance initiative. If implementation progresses well, the Commission will consider recommendations for concrete steps to increase the use of managed care in Medicaid.

This section discusses the current status of Medicaid managed-care arrangements, the experience of managed care in serving Medicaid beneficiaries, and policy options for improving access for Medicaid beneficiaries to high-quality managed-care providers.[11]

Current Status of Medicaid Managed Care

Medicaid managed-care arrangements include HMOs, prepaid health plans (PHPs), health insuring organizations (HIOs), and primary care case management (PCCM). Various aspects of these managed-care arrangements are regulated by federal and state legislation as well as regulation and administrative program requirements.

Types of Medicaid Managed Care. During the early years of the Medicaid program, neither private nor public health insurance plans used much managed care. By 1972, Medicaid had contracts only with the Health Insurance Plan of Greater New York, Kaiser-Permanente, and Group Health Cooperative of Puget Sound. The first concerted effort by a state to expand managed care occurred when California contracted with managed-care organizations in the early 1970s (CRS 1988). By 1981 California had 47 percent of the total Medicaid managed-care enrollees (Morrison and Luft 1990). Currently, about 10 percent of all Medicaid beneficiaries receive care from 224 managed-care plans, which can be classified into four types of managed-care arrangements.

HMOs provide comprehensive health services to Medicaid beneficiaries in return for a capitated payment that is based on expenditures for comparable beneficiaries in fee-for-service Medicaid. In many states the amount of financial risk born by HMOs is limited to a corridor or by stop-loss arrangements.

State Medicaid programs may contract with either federally qualified or state plan-defined HMOs. Federally qualified HMOs must provide specified benefits, adhere to limitations on copayments and deductibles, make services available with reasonable promptness to enrollees, not refuse to reenroll or expel a member on the basis of health status or age, and have an acceptable ongoing quality assurance process. They also must have broadly representative enrollment and use community rating to determine premiums (42 CFR

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[11] Chapter 12 provides further information about the role of managed care in the health care delivery system.

417.100-109).[12] Many HMOs obtain federal qualification because it gives a stamp of approval, indicating that the HMO has met certain standards. In addition, the Health Maintenance Organization Act of 1973 (P.L. 93-222) requires certain employers to offer their workers a choice between a federally qualified HMO, if one is in the area, and indemnity health insurance. Other HMOs opt not to seek federal qualification for various reasons. For example, federal qualification may constrain an HMO's ability to be competitive by requiring benefits that are expensive (such as infertility services) and subject the HMO to adverse selection. Community rating of premiums may place federally qualified HMOs at a disadvantage in competition with indemnity plans using experience rating. Thus, about 50 percent of all HMOs are federally qualified, representing about 74 percent of total HMO enrollment.

State Medicaid programs can also contract with HMOs that are not federally qualified, as long as they meet certain requirements which a state Medicaid agency stipulates in its Medicaid plan. These requirements specify, among other items, that these HMOs must be organizations that primarily provide health care services, afford access equivalent to that available to other Medicaid beneficiaries in the area, and make arrangements against risk of insolvency (42 CFR 434.20). Additionally, these HMOs must meet Medicaid quality assurance standards (discussed below).

Those without federal qualification do not necessarily offer fewer benefits or have lower standards for quality assurance. Two of the most highly respected HMOs, for example, have approached Medicaid participation differently: Kaiser-Permanente participates as a federally qualified HMO and Group Health Cooperative of Puget Sound participates under a state plan qualification.

Most Medicaid beneficiaries in HMOs are enrolled in federally qualified HMOs. Fifty-six federally qualified HMOs serve 700,227 Medicaid beneficiaries. Seventy-eight state plan HMOs serve 583,416 beneficiaries (Table 6-1).

PHPs are certain community, migrant or Appalachian health centers located in medically underserved areas; organizations that contract with the state Medicaid agency for a less-than-comprehensive list of services or on a nonrisk basis; and organizations that are statutorily exempt from HMO requirements. Some 53 PHPs serve 445,593 beneficiaries.

HIOs pay for services of subcontracting providers and assume all financial risk in exchange for a premium. The HIO organizes the network of providers with preauthorization and utilization review to control the volume of services. The providers in the network serve as case managers and, in some HIOs, receive capitated payments. While HIOs function very much like independent practice associations, they include all physicians who are willing to abide by the specified contractual arrangements and all Medicaid beneficiaries who live in a designated area. Five HIOs serve about 161,971 Medicaid beneficiaries.

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[12] The quality assurance program must (1) examine health outcomes, (2) collect systematic data on performance and provide results to providers, (3) have health professionals review the quality assurance measures and outcomes, and (4) have written procedures for taking remedial action.

Table 6-1. Medicaid Managed-Care Plans, 1991

Type of Plan	Number of Plans	Number of Enrollees
HMOs, Federally Qualified	56	700,227
HMOs, State Plan-Defined	78	583,416
Health Insuring Organizations	5	161,971
Prepaid Health Plans	53	445,593
Primary Care Case Management	32	805,190
TOTAL	**224**	**2,696,397**

Source: Adapted from HCFA 1992.

Under PCCM arrangements, a primary care physician coordinates and approves an array of services, specified by the state, in addition to providing primary care services. In most PCCM systems, physicians are paid case management fees (typically $3 per beneficiary per month) in addition to their regular fee-for-service payments for the primary care services they provide. In others, physicians are placed at financial risk for some services (usually ambulatory care). Physicians may determine the level of their Medicaid caseloads, up to a state-specified limit. For some physicians, these arrangements are attractive because the number of beneficiaries can be limited and the physician can provide services in a fashion that ensures continuity of care. At present, 32 primary care case management programs provide care to 805,190 beneficiaries. Since those PCCM programs that pay fee-for-service payments and monthly case management fees do not have the same incentives as capitated arrangements, they do not evoke the same concerns. Therefore, this chapter does not consider policy changes for them.

Managed care has grown rapidly in Medicaid during the last few years—from only 281,926 beneficiaries in 1981 to about 2.7 million beneficiaries in 1991. More rapid growth is expected in the near future because many states are developing or expanding managed care for Medicaid beneficiaries. New York, for example, is planning to have one-half of its Medicaid beneficiaries enrolled in managed care in three years. Maryland plans to require all Aid to Families with Dependent Children beneficiaries to enroll in HMOs or its primary care case management program. Michigan is planning to expand gradually its three mandatory managed-care options to all counties. In addition, Michigan is developing specific managed-care products for beneficiaries with special health problems such as AIDS and chronic mental illness.

Nevertheless, Medicaid beneficiaries appear less likely than the general population to be enrolled in managed-care plans. For example, only about 5 percent of Medicaid beneficiaries are enrolled in HMOs, compared with 15 percent of the population (Shikles 1991). Only about 19 percent of HMOs have Medicaid contracts (GHAA 1990).

Additionally, access to managed care varies considerably by state (Table 6-2). Nineteen states have over 80 percent of the Medicaid beneficiaries in managed care. Nine states have no beneficiaries in managed care and the remainder have few enrolled in managed care.

Table 6-2. Medicaid Enrollees in Managed-Care Programs, 1991

State	Managed Care Enrollees
Alabama	15,649
Alaska	0
Arkansas	0
California	471,942
Colorado	110,353
Connecticut	0
Delaware	0
District of Columbia	10,907
Florida	172,886
Georgia	0
Hawaii	2,900
Idaho	0
Illinois	102,056
Indiana	1,065
Iowa	46,358
Kansas	51,962
Kentucky	196,836
Louisiana	0
Maine	0
Maryland	58,197
Massachusetts	51,401
Michigan	144,896
Minnesota	61,266
Mississippi	0
Missouri	55,874
Montana	0
Nebraska	0
Nevada	5,171
New Hampshire	2,083
New Jersey	5,616
New Mexico	78,000
New York	88,213
North Carolina	39,377
North Dakota	0
Ohio	129,656
Oklahoma	0
Oregon	67,774
Pennsylvania	170,216
Rhode Island	361
South Carolina	12,260
South Dakota	0
Tennessee	20,211
Texas	0
Utah	76,031
Vermont	0
Virginia	0
Washington	16,027
West Virginia	0
Wisconsin	119,082
Wyoming	0

Source: HCFA 1992.

Evaluating the Experience of Managed Care in Medicaid. The experience with managed care in Medicaid has been mixed. While there have been some problems in the care provided by certain managed-care organizations, researchers have demonstrated that the quality of care in general is at least equivalent to that furnished to Medicaid beneficiaries by fee-for-service providers. It also appears that managed care lessens emergency room use and reduces expenditures for states and the federal government. On balance, with an enhanced quality assurance program, greater use of managed care in Medicaid could extend access to health care for beneficiaries.

Referring to examples of well-run, high-quality organizations, managed care advocates have described the potential advantages managed care holds for improving beneficiaries' access and the quality of care. From the perspective of beneficiaries, such organizations can strengthen physician-patient relationships, guarantee access to providers, improve preventive care, and ensure the quality of care. Further, around-the-clock access to physicians, which managed-care entities commit to provide, guarantees a contact point for the treatment of acute problems. Managed care has been documented to decrease the use of hospital emergency departments.

From the governmental perspective, managed care has the potential to control growth in volume of services and, under capitated managed-care plans, guarantee predictable annual expenditures. Medicaid is the second-largest item in state budgets after elementary and secondary education, and is experiencing the second-largest percentage growth after corrections. Thus, reducing Medicaid costs and ensuring predictable expenditures are important goals for states, especially given many of their legal requirements for balanced budgets and the bleak economic situation faced by many states.

Although research studies on Medicaid managed care temper the claims of advocates, on balance they demonstrate that managed-care organizations provide care that is at least equivalent to fee-for-service Medicaid, slightly improves preventive care, reduces emergency room use (and thus presumably improves continuity of care), guarantees access, and lowers costs.[13] These outcomes have been established for various types of managed-care arrangements by evaluations of the Arizona Health Care Cost Containment System (AHCCCS), the Medicaid Competition Demonstrations, and other programs. AHCCCS and the Medicaid Competition Demonstrations were approved under the Medicaid demonstration waiver authority granted to HCFA. AHCCCS provides medical services primarily to beneficiaries who would be eligible for Medicaid if Arizona had a traditional Medicaid program. Under AHCCCS providers of services are selected on the basis of competitive bidding and are paid a capitated rate. The Medicaid Competition Demonstrations, which occurred in six sites, tested innovative delivery systems including capitation and primary care case management.

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[13] Whereas the care is equivalent in fee-for-service and managed care, two studies of obstetrical care found that care provided by both delivery systems was unsatisfactory (Goldfarb et al. 1991; Carey et al. 1991).

Beneficiary satisfaction with managed care appears to be high even though some of the enrollment was mandated. But compared to fee-for-service, the results are mixed. More than 78 percent of AHCCCS beneficiaries were satisfied with care, but some measures of satisfaction were higher in the fee-for-service comparison site. In the Medicaid Competition Demonstrations, beneficiary satisfaction was lower in managed-care sites than in fee-for-service comparison sites. Again, however, most managed-care beneficiaries were satisfied with their care (Freund et al. 1989). By contrast, managed-care beneficiaries in Rochester, New York were more satisfied than they had been previously with fee-for-service care (Temkin-Greener and Winchell 1991).

Managed care reduces the use of hospital emergency departments, as noted earlier. Across all Medicaid Competition Demonstrations, there were significant reductions in emergency department use by both children and adults (Freund et al. 1989). Further, improved continuity of care was likely with less use of emergency departments, although the studies did not measure that.

For other types of care, there were few differences between managed care and fee-for-service care. Reported utilization for urgent care did not differ between AHCCCS and fee-for-service beneficiaries. While fewer beneficiaries in the fee-for-service comparison site indicated difficulty in receiving routine care than in the AHCCCS, the waiting times were similar (McCall et al. 1988). The number of visits and phone contacts for beneficiaries in the AHCCCS and the fee-for-service comparison site was the same (McCall et al. 1988). Based on medical records, adult acute and chronic care was equivalent in Medicaid Competition Demonstrations and comparison sites(Freund et al. 1989). There were few differences in primary prevention activities between managed-care and fee-for-service sites (McCall 1988; Freund et al. 1989), although children were more likely to have basic childhood immunizations in the managed-care sites (Freund et al. 1989).

Comparisons of prenatal care and birth outcomes between managed-care and fee-for-service settings also show no differences. There were no differences between fee-for-service sites and Pennsylvania's HIO in the mean week of first prenatal visit, mean number of visits, adequacy of prenatal care, number of babies with low birthweight, mean Apgar score (a measure of the physical condition of newborns), and live births (Goldfarb et al. 1991). In a study of two Medicaid Competition Demonstrations, birth outcomes were similar to those in comparison sites (Carey et al. 1991).

Generally, expenditures are reduced by managed care. AHCCCS saved medical costs in its first seven years (McCall et al. 1991). The Michigan Physician Sponsor Plan (PSP) for 1990/1991 cost about 14 percent less than fee-for-service care even though the health status of PSP enrollees prior to enrollment appeared to be worse (McCandless 1991). Minnesota estimated that it saved about 10 percent on its prepaid managed-care programs in 1989 (Minnesota Department of Human Services 1991). Six of seven risk plans evaluated by Welch (1990) produced savings.

In addition to reducing state and federal expenditures, prepaid capitated arrangements guarantee predictable expenditures during a fiscal year. Given the recent unanticipated growth in Medicaid expenditures and the dismal financial situation of many states, capitated arrangements are a welcome development that lowers costs and controls what otherwise would be unpredictable expenditures.

Despite advantages, some experiences with managed care have been notably unsuccessful. Some prepaid capitated contractors have abused the system. During the 1970s in California there was deceitful marketing, favorable selection, disenrollment upon sickness, financial irregularities, poor quality or nonexistent care, conflict of interest by former state employees, little state regulation, and lack of responsiveness to complaints.

While federal and state reforms were designed to correct the most blatant, earlier abuses, there is a concern that capitated managed-care plans may underserve enrollees especially when Medicaid capitation rates are low. This concern stems from two aspects of capitated managed care. First, without countervailing safeguards, these organizations have financial incentives to reduce the use of services, increasing the likelihood of underservice. Second, financial arrangements with physicians in some managed-care organizations may influence physicians' clinical judgements and, thereby, jeopardize the quality of care provided to enrollees.[14] Satisfactory implementation of the OBRA90 provision that disallows the use of physician financial incentives unless the HMO provides adequate stop-loss protection, and surveys current and previous enrollees to determine degree of access and satisfaction with care may lessen concerns about physician financial incentives.[15]

The concern about underservice increases when the state either fails to require contracts that adequately ensure quality or lacks sufficient oversight of managed-care programs. Based on analysis of contracts and interviews with Medicaid officials and managed-care administrators, Rosenbaum and others (1988) concluded that many managed-care arrangements were deficient because they had vague contracts without detailed standards for benefits and provider qualifications, protocols for treatments, quality controls, and referral guarantees.

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[14] For example, the General Accounting Office raised concerns about potential problems due to perverse financial incentives in the Medicaid managed-care program in Chicago (GAO 1990).

[15] Although proposed regulations on financial incentives scheduled for release in January 1992 have not been issued, it is expected that they will be published shortly.

The lack of adequate oversight by states is illustrated by the Illinois Medicaid program's failure to ensure that Chicago area managed-care organizations had satisfactory quality assurance programs (GAO 1990). With appropriate safeguards, capitated plans can protect the quality of care, however. Recently, the GAO noted the success of Oregon's risk-based managed-care program (Shikles 1991). The development of an enhanced federal quality assurance program would provide further safeguards.

In summary, the experience with managed care in Medicaid indicates that it is at least equivalent to fee-for-service Medicaid care as measured by degree of access, quality, and satisfaction. For some types of services, such as immunizations, managed care appears to be better. In other areas, such as prenatal care, care is equivalent but disappointing under both delivery systems. Managed-care organizations have the potential to measure and ensure quality of care, but quality assurance oversight by states has been uneven. Medicaid managed care has achieved some savings and capitated managed care ensures predictable state expenditures for a year.

Although a comparison of both delivery systems shows care to Medicaid beneficiaries to be equivalent, it should be noted that Medicaid beneficiaries generally appear to have less access to care and receive lower quality services than the general population. Even though Medicaid beneficiaries and the general population receive an equivalent number of visits, beneficiaries' access to other services and the quality of care they receive have raised concerns. People covered by Medicaid, for example, receive fewer procedural and surgical services for the same conditions than those covered by private insurance (Braveman et al. 1991; Wenneker et al. 1990). Further, prenatal care provided to Medicaid beneficiaries appears to be unsatisfactory (Goldfarb et al. 1991; Carey et al. 1991).

Quality Assurance Requirements. Federal and state governments play significant roles in setting and enforcing quality assurance standards for Medicaid managed care. At various times, Congress responded to concerns about quality by establishing indirect quality criteria and provisions for the actual measurement of quality. The major purpose of the indirect criteria — voluntary enrollment, rules defining the allowable proportion of enrollees from public programs, and favored treatment of federally qualified HMOs — was to enhance the likelihood for high quality care in Medicaid managed-care settings. To ensure quality of care by direct measurement, there are provisions for internal quality review programs, medical audits, and independent annual reviews.

The concept behind the rule restricting enrollment composition is to limit Medicaid enrollment to those HMOs that maintain standards of care high enough to attract and retain contracts with employer plans. Congress passed legislation in 1976 that allowed enrollment of Medicaid beneficiaries in only those federally qualified HMOs that had no more than 50 percent Medicaid and Medicare enrollment (50/50 rule), HMOs that had Medicaid contracts before 1970, and PHPs in underserved areas. In 1981 Congress softened this provision to permit up to 75 percent Medicaid and Medicare enrollment (75/25 rule) and to permit enrollment in state plan HMOs.[16]

To ensure that Medicaid beneficiaries could leave an HMO that they found to provide poor quality care, Congress also guaranteed the right to enroll and disenroll voluntarily from managed-care plans. Voluntary disenrollment allows dissatisfied beneficiaries to leave the plan and seek care from other providers. If enough beneficiaries terminate their enrollment in a plan, it would force the provider to make needed changes or discontinue its Medicaid contract. In 1984 Congress eased this restriction by permitting states to limit disenrollment without cause from all federally qualified HMOs for six months after enrollment.

The provisions for direct measures of quality in Medicaid managed care include those that apply to fee-for-service Medicaid as well as some additional requirements. These provisions require that HMOs have an internal quality review program; states perform periodic medical audits to make sure that HMOs are providing access to quality services; and states arrange for independent, annual reviews of services provided by HMOs and HIOs (Table 6-3). While these direct measures appear to provide for an adequate quality assurance program, there are deficiencies and problems.

Whereas some states have failed to provide adequate oversight, others have been extremely successful in ensuring high-quality managed-care products. For example, Minnesota's quality assurance policy includes advocates for beneficiaries, a grievance process, a toll-free telephone line for complaints, contract monitoring, independent quality assurance with site visits, and medical record reviews for specific elements. As noted previously, Illinois' program was not successful. Overall, quality assurance standards and processes across the states appear to be uneven.

In addition to uneven quality assurance standards and enforcement across the states, there are two problems with the federal government's approach to quality assurance: indirect quality criteria are proxies for quality that may foreclose certain options that increase access to services of acceptable quality; and direct standards are unclear. Some provisions, such the 75/25 rule, serve only as indirect proxies for quality and decrease already limited access to care for Medicaid beneficiaries. This rule may hinder the development of HMOs in underserved areas.

Direct federal quality assurance standards lack specificity. For example, internal quality assurance programs are required to collect data on performance and patient results; however, the federal government does not specify the data elements to be collected or the expected performance. An example of a clearer specification might require HMOs to collect data on immunizations of children and might apply the U.S. Public Health Service's child immunization schedule to judge the results.

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[16] HCFA may grant temporary waivers from the 75/25 rule for publicly owned HMOs, HMOs in underserved areas, HMOs that previously participated in a demonstration project, and HMOs that have had contracts for fewer than three years. The rule may be waived for PHPs for an unlimited period at the discretion of states.

Table 6-3. Current Medicaid Quality Assurance Requirements

FUNCTION	HMO/HIO	PHP	FFS/PCCM
Internal QAP	Regulations (42 CFR 434.34) require each HMO/HIO to have an internal QA system that: (a) is consistent with Medicaid fee-for-service utilization control requirements; (b) provides for review by appropriate health professionals of the process followed in providing health services; (c) provides for systematic data collection of performance and patient results; (d) provides for interpretation of this data to the practitioner; and (e) provides for making needed changes.		
Periodic Medical Audit	Regulations at 42 CFR 434.53 require the State Medicaid Agency to: "Establish a system of periodic medical audits to insure that each contractor furnishes quality and accessible health care to enrolled recipients. This system must: (a) provide for audits conducted at least once a year for each contractor; (b) identify and collect management data for use by medical audit personnel; and (c) provide that the data includes reasons for enrollment and termination, and use of services.		Regulations at 42 CFR 456.22 specify that "the Medicaid agency must have procedures for the on-going evaluation, on a sample basis, of the need for and quality and timeliness of Medicaid services". Further specification is given at 42 CFR 456.23 which states that the "agency must have a post-payment review process that: (a) allows state personnel to develop and review: - recipient utilization profiles - provider service profiles - exceptions criteria; and (b) identifies exceptions so that the agency can correct misutilization practices of recipients and providers."
Independent External Review	Section 1902(a)(30)(C) of the Social Security Act requires each State to use one of three types of entities to annually conduct an independent, external review of the quality of services furnished under each contract with an HMO/HIO.		
Grievance Procedures	42 CFR 434.32 requires a grievance procedure that: (1) is approved by the Medicaid state agency; (2) provides for prompt resolution; and (3) assures the participation of individuals with authority to require corrective action.		
Enrollment Composition	Statute and regulations (42 CFR 434.26(a)) contain a requirement that, in general, each HMO/HIO's enrollment may not be composed of greater than 75 percent Medicaid and/or Medicare recipients. Although the original purpose of this requirement was not explicit, it is now cited as a proxy QA mechanism, on the theory that an HMO/HIO which can attract 25 percent commercial enrollment is one which offers adequate quality care. Certain entities are able to have this requirement waived.		

Table 6-3. (cont'd)

FUNCTION	HMO/HIO	PHP	FFS/PCCM
Disenrollment on Demand	Enrollees are generally able to disenroll from an HMO/HIO on demand without having to show cause one month after they make such a request. Although many organizations have been able to waive this requirement, it is still a general condition of participation for many organizations wishing to contract with State Medicaid agencies on a risk basis (42 CFR 434.27(b)(1)).		
Physician Incentive Program	Section 4204, OBRA 1990:(8)(A), "Each contract with an eligible organization under this section shall provide that the organization may not operate any physician incentive plan ...unless the following requirements are met: (i) No specific payment is made directly or indirectly under the plan to a physician or physician group as an inducement to reduce or limit medically necessary services provided with respect to a specific individual enrolled with the organization. (ii) If the plan places a physician or physician group at substantial financial risk (as determined by the Secretary) for services not provided by the physician or physician group, the organization (1) provides stop-loss protection for the physician or group that is adequate and appropriate, based on standards developed by the Secretary that take into account the number of physicians placed at such substantial financial risk in the group or under the plan and the number of individuals enrolled with the organization who receive services from the physician or the physician group, and (2) conducts periodic surveys of both individuals enrolled and individuals previously enrolled with the organization to determine the degree of access of such individuals to services provided by the organization and satisfaction with the quality of such services. (iii) The organization provides the Secretary with descriptive information regarding the plan, sufficient to permit the Secretary to determine whether the plan is in compliance with the requirements of this subparagraph. (B) In this paragraph, the term "physician incentive plan" means any compensation arrangement between an eligible organization and a physician or physician group that may directly or indirectly have the effect of reducing or limiting services provided with respect to individuals enrolled with the organization. (HMO/HIO only)		

Source: National Academy of State Health Policy, 1991.

To improve Medicaid quality assurance policies, HCFA has developed a Quality Assurance Reform Initiative for Medicaid managed care, which appears to be a promising endeavor. HCFA is consulting with industry, state officials, and beneficiary advocacy organizations to identify appropriate quality assurance practices and policies. Through a contract with the National Academy for State Health Policy, a committee of HMO medical directors has been convened to develop standards. That group has compiled and analyzed the internal quality assurance standards for Medicare, the operational guidelines of the National Association of Health Maintenance Organization Regulators and the National Association of Insurance Commissioners, and the quality assurance standards of the National Committee for Quality Assurance to identify standards that are essential to effective managed-care quality assurance programs. Additionally, HCFA plans to identify specific clinical standards developed by other organizations for the treatment of high-priority services (e.g., perinatal care and preventive health).

If the new quality assurance program is adopted by a state, its Medicaid contracts with HMOs, HIOs, and PHPs would require internal quality assurance programs that incorporate HCFA's standards. Conforming states would monitor managed-care organizations to determine whether they meet these standards and whether their quality assurance programs are effective. States and managed-care organizations would have separate grievance processes. It is expected that HCFA's new program will subject Medicaid managed-care programs to state-of-the-art quality assurance procedures that are consistent with those in Medicare and the private sector.

HCFA anticipates that its quality assurance proposal will be developed by September 1992. It is not clear whether HCFA will propose that state adoption of these standards be mandatory or voluntary. New statutory authority may be necessary to implement all the quality assurance mechanisms identified through this activity.

Factors Limiting the Expansion of Managed Care

Several factors inhibit the participation of managed-care organizations in Medicaid. These organizations currently face disincentives to entering the Medicaid market, such as low capitation payments and high turnover rates. A consequence of certain federal policies adopted to protect Medicaid beneficiaries from poor quality managed care has been to restrict development of managed-care options (especially innovative ones) for Medicaid beneficiaries.

Capitation rates in many states may be too low to attract managed-care providers to accept Medicaid contracts. Rates for managed-care risk contracts are set by states, but must not exceed the fee-for-service equivalent. Typically, states pay between 90 percent and 100 percent of the average cost under Medicaid fee-for-service. Medicaid rates under fee-for-service are, however, quite low—averaging 64 percent of Medicare rates (PPRC 1991). In states with low Medicaid fees, HMOs may not be able to save enough from decreased hospitalization and emergency room use to provide services at those significantly reduced rates.[17] A 1990 survey of member plans by the Group Health Association of America (GHAA) indicated that increasing capitation rates was the most important improvement for both maintaining current risk contracts with HMOs and encouraging new plans to participate (GHAA 1990).

Significant turnover in Medicaid enrollment is another important obstacle to participation by managed-care organizations. The rapid change in Medicaid eligibility and enrollees' ability to disenroll without cause on a one-month notice are contrary to the goals of managed care, and make organizational planning difficult. One study showed that of those eligible for Medicaid at the beginning of a 32-month period, only 44 percent remained eligible through the entire period (Short et al. 1988).

Marketing managed-care plans to Medicaid beneficiaries is difficult and has caused problems. To a greater extent than with private employers, the enrollment period continues throughout the entire year for Medicaid. Further, Medicaid cannot provide HMOs with lists of potential enrollees. Consequently, marketing is done either through welfare or food stamp offices by caseworkers (or sometimes by the plans themselves) or, in a few states, directly on a door-to-door basis. Each marketing approach has limitations. Since a caseworker's main task is to determine whether applicants meet eligibility criteria, there is a concern that the caseworker may not provide adequate information about health plans. On the other hand, door-to-door marketing is expensive and, in some cases, deceitful techniques have been used to enroll beneficiaries.[18]

The 75/25 percent enrollment rule limits the number of HMOs that can provide services to Medicaid beneficiaries. Given the residential segregation of some Medicaid beneficiaries, it may be difficult to find nearby HMOs that could meet this enrollment rule.

From the state perspective, the development of innovative managed-care options is hindered by the rules for federal waivers. The waiver provisions are designed to allow Medicaid programs to adopt alternative health care delivery systems, while ensuring the achievement of federal goals. HCFA can waive basic Medicaid requirements (freedom of choice, uniform statewide operation, and comparability of benefits) or rules for prepaid plans for two years under Section 1915 of the Social Security Act.[19] Applications for Section 1915 waivers must demonstrate that the proposed program will be cost effective and will not hinder access to necessary care (42 CFR 431.55).

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[17] As a result of low rates, some states have reported difficulties in negotiating contracts with both new and former providers (Riley 1990).

[18] In the 1970s, many of the problems in managed care that California's Medi-Cal program experienced were in marketing. Recently, there have been reports of marketing abuses in the Medi-Cal program (Spiegel 1992).

States are discouraged from using these waivers for several reasons. Whereas HCFA has streamlined the initial waiver process for primary care case management programs, developing applications for other waivers requires a considerable commitment of staff.[20] For a typical state, one staff member would have the major responsibility for developing the waiver for about six months prior to its submission. After HCFA's 90-day review period, that person would be committed to providing additional information. Once a waiver is granted, there is a requirement for the collection and analysis of nonroutine data for renewal applications. Since the waiver is only for two years, measuring the program's impact on access and its cost effectiveness for the waiver renewal must occur in the first year of the program. In addition to the pressures placed on the state by the two-year waiver process, the short waiver period and the uncertain continuation of the waived program make providers hesitant to participate.

Policy Discussion

Admittedly, a number of federal policies inhibit development and wider use of managed care in Medicaid. Without an assurance of more effective protection of beneficiaries, however, changes in these policies are ill-advised. If the new HCFA standards can ensure access to quality care in managed-care organizations, there is an opportunity to look at the drawbacks of current policies and consider changes. This section reviews some of the options that could be considered under those circumstances. It examines the potential elimination of indirect quality assurance policies that act as barriers to the development of managed care as well as incentives to encourage the participation of quality managed-care organizations in Medicaid.

Acceptable Quality Assurance Standards. The development of specific quality assurance standards and processes for Medicaid managed care is crucial for eliminating abuses and gaining the confidence of beneficiaries and policymakers in the ability of managed care to provide high-quality care. While HCFA's initial effort to develop a new quality assurance program for Medicaid managed care is encouraging, the Commission awaits its final adoption.

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[19] Waivers from Medicaid requirements are permitted for demonstrations and pilot projects under Section 1115 of the Social Security Act. For example, the AHCCCS program operates with a Section 1115 waiver. Since Section 1115 waivers are time-limited (usually three to four years) and nonrenewable, states must pursue specific federal legislative authority to continue these managed-care delivery programs.

[20] Currently, HCFA is developing a streamlined renewal application form for primary care case management programs and plans to develop one for capitated systems.

The Commission will apply specific criteria in its assessment of the acceptability of the new HCFA policy (Table 6-4). Among those are that an acceptable quality assurance program should use state-of-the-art internal quality assurance processes and standards. It should clarify the oversight roles of HCFA and state Medicaid programs in ensuring quality in those managed-care organizations with Medicaid contracts. Finally, while recognizing that Medicaid may have special quality assurance interests, it should be coordinated with the quality assurance efforts of other payers so that it imposes no unnecessary burden on managed-care organizations.

Potential Policy Changes. After the implementation of an effective quality assurance program, the Commission intends to consider changes to federal policies that hinder access to managed care. First, the Commission will consider recommendations to provide an exemption from the enrollment composition rule and to eliminate the necessity for waivers or to extend the waiver period for five years in those states meeting the new quality assurance standards.

The Commission will also consider changes to encourage managed-care providers to serve Medicaid beneficiaries in those states that implement the new quality assurance program. For example, current law allows for federal matching payments to extend Medicaid eligibility for a Medicaid beneficiary enrolled in a federally qualified HMO for up to six months after loss of eligibility.[21] That provision could be broadened to encompass those enrolled in state plan HMOs in states meeting the new quality assurance standards. Extending enrollment reduces eligibility volatility, providing the stability needed for managed-care planning. It also would give Medicaid beneficiaries an incentive to join HMOs voluntarily by furnishing health insurance to those who likely would be uninsured with the loss of Medicaid eligibility.[22]

States that adopt the new quality assurance standards could be allowed to set capitation rates up to a fee-for-service equivalent based on Medicare rates for managed-care entities. This would cost much less than a general increase in fee-for-service payments, while in the process providing additional access for Medicaid beneficiaries. This is an example of a policy option that would allow a state to target increased fees in a way that it determines to be cost effective.

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[21] Currently, 11 states have implemented such enrollment extensions.

[22] Short and others estimated that 55 percent of those who lost Medicaid became uninsured (1988).

Table 6-4. The Commission's Criteria for an Acceptable Quality Assurance Program for Medicaid Managed Care

Require quality assurance standards and processes for managed care organizations that are equivalent to those required by the private sector. These would include:

- successful communication with enrollees about their rights and responsibilities.
- a meaningful grievance process that provides for effective and timely responses.
- an internal quality assurance program that has the capacity to measure the process and timeliness of health care delivery, and health outcomes, consistent with the state of art.
- organizational verification of providers' credentials and periodic recredentialing of providers.
- an effective remediation process for deficiencies identified in the quality assurance process.
- evidence that the board of directors and top management of the organization are accountable for and supportive of the quality assurance activities.
- successful completion of an external quality of care review conducted by a federally approved organization.

Have effective state oversight of the quality assurance programs of those managed care organizations that serve Medicaid beneficiaries.

Have a state grievance process that provides for prompt and effective resolution of complaints that are not promptly or satisfactorily resolved by organizational grievance processes.

Have an enforceable federal monitoring plan to guarantee state oversight of the quality assurance standards.

Have national quality standards for specific targeted conditions or preventive health requirements such as pregnancy or childhood immunizations.

Be consistent and coordinated with the quality assurance efforts of other federal and state programs and the private sector.

PROGRESS REPORT ON FEES AND ACCESS

In addition to work on the policy options discussed above, the Commission has continued this year to analyze the relationship between Medicaid fees and access to care. Since the Medicaid report was completed in July 1991, this work has focused on two activities described below: analyzing data on changes in fees since 1989 and reviewing recent research to identify the conditions under which fee increases are most likely to improve access. In addition, the Commission has considered the impact of the equal access provision of OBRA89 on payments and access to care. This provision requires states to submit documentation annually to demonstrate that their Medicaid fees are sufficient to ensure that services are available to Medicaid beneficiaries to the same extent as they are available to the general population (Section 6402, P.L. 101-239). The section concludes by describing the Commission's work plan for the year ahead.

Increases in Fees

The Commission's 1991 Medicaid survey documented wide variation in the recency and breadth of updates in Medicaid fees through 1989 (PPRC 1991). Data from a new survey by the Urban Institute indicate that some states increased fees between 1989 and 1990, but that the amount of increases varied across states and across services. More than half of the states did not increase fees during this period. Consequently, Medicaid fees in these states have declined relative to fees of other payers (Holahan 1991).

In general, fee increases were larger for obstetrical services than for office visits. In 16 states, fees for routine deliveries rose by more than 10 percent; in three states — Colorado, New Hampshire, and Louisiana — fees were increased more than 100 percent.[23] In seven other states, fees increased but only by 5 percent or less. In contrast, in 16 states, fees for limited office visits with established patients increased by more than 5 percent; in three states, they rose by less than 5 percent (Holahan 1991).

Information on 1990 and 1991 pediatric and obstetrical fees submitted to HCFA by the states to comply with the OBRA89 equal access provision also suggests that only a handful of states are increasing physician fees and that fee increases are more substantial for maternity services than for primary care.

Research Studies

Last year, after an examination of the scholarly research on the relationship between fees and access for Medicaid beneficiaries, the Commission reached two tentative conclusions. First, fee levels do not appear to influence the number of services Medicaid beneficiaries receive. Second, fee levels seem to affect the site of care, with beneficiaries in states having higher fees more likely to receive care in physicians' offices. Moreover, care delivered in emergency rooms is more costly and, controlling for severity of illness and other appropriate factors, likelier to lead to hospitalization.[24]

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[23] Fees increased from $233 to $488 in Colorado, from $303 to $760 in Louisiana, and from $360 to $810 in New Hampshire.

Consistent with past studies, the consensus of recent research is that fee levels do not influence the amount of ambulatory care beneficiaries receive. On the basis of data from the National Medical Care Expenditure Survey, Cohen (1991) concluded that there is no positive relationship between fee levels and the probability of any ambulatory care use or on the number of visits. In a pre-post analysis of Maine Medicaid claims, Lambert and others (1991) could not establish a positive impact of significant fee increases on access to care as measured by utilization of services.

Recent research studies of the effect of fees on site of service for Medicaid beneficiaries have reached somewhat conflicting conclusions. An analysis of visits per Medicaid beneficiary in Illinois counties implies that emergency room care and office visits were not substitutes, so that fee levels would not affect site of service (Fossett et al. 1991). By contrast, Cohen (1991) established that higher fees made it slightly more likely that beneficiaries would receive care in the office rather than in the emergency room. Additionally, Maine experienced a decrease in emergency room visits after the fee increase (Lambert et al. 1991).

Controlling for other variables, those beneficiaries who received care in emergency rooms were likelier to be admitted to the hospital than those who received care in physicians' offices (Cohen 1991). The use of emergency rooms for primary care is of concern because they are less appropriate settings for primary care, lead to higher costs, and limit the ability of these facilities to treat true emergencies (Andrulis et al. 1991; Bindman et al. 1991; Baker et al. 1991).

Impact of the OBRA89 Equal Access Provision

In addition to the research literature, state plan amendments submitted in compliance with the OBRA89 equal access provision also afford an opportunity to consider the relationship between fees and access to care. Federal regulations have long required that Medicaid fees be sufficient to ensure that Medicaid beneficiaries have access to care comparable to that of the general population. But until passage of OBRA89, states were not obligated to demonstrate compliance with this requirement. States must now submit documentation to HCFA each April which ensures that payment levels for pediatric and obstetrical services meet this requirement. The Secretary of Health and Human Services is required to either approve or disapprove these plans within 90 days; disapproved plans must be resubmitted within 90 days.

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[24] In addition, the impact of fee levels on physician participation in Medicaid remains unclear. Lambert et al. (1991) found that fee increases did not affect physician participation in Maine. By contrast, using survey data, Mitchell (1991) found that physicians are more likely to participate where fees are higher.

While this new requirement signaled the Congress's view that steps should be taken to ensure access to care, it does not yet appear to have prompted systematic changes by the states in either Medicaid fees or other policies. This may partly reflect poor guidance and oversight from HCFA. Although draft instructions on the measures of access to be used in formulating plan amendments were issued to the states in March 1990, a final regulation and instructions to the states have yet to be issued. As a result, HCFA does not have a lever to ensure compliance.[25]

Beyond administrative issues, better measures of access are needed to ensure that the law leads to improvements in access for the Medicaid population. Most states have been judged to be in compliance by certifying that at least 50 percent of obstetrical and pediatric practitioners are full Medicaid participants. Yet few can demonstrate whether physicians enrolled in the Medicaid program accept all Medicaid beneficiaries requesting care or the extent of their Medicaid caseload.[26] This confirms the experience from the Commission's Medicaid survey that states have limited ability to track the depth of physician participation.

Moreover, while many state Medicaid programs have undertaken special policies to improve access for certain populations (such as high risk pregnant women) or in certain geographic areas, most do not have systematic methods for monitoring access. HCFA could help the states meet this requirement by developing measures of access appropriate to the Medicaid population and providing technical assistance to implement appropriate monitoring systems.

In spite of these critical shortcomings, the equal access provision may lead to changes in Medicaid policy through the courts. Suits have either been filed or will soon be filed in California, Illinois, New Hampshire, Pennsylvania, Tennessee, and West Virginia to force states to raise fees and take other steps to ensure access. Among these are providing transportation for beneficiaries, improving outreach under the Early Periodic Screening Diagnosis and Treatment program, and streamlining claims processing (Perkins 1992; Somerville 1991).

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[25] Plan amendments submitted in April 1990 by seven states have still not been approved.

[26] Full participation means accepting all Medicaid patients who present for care.

WORK PLAN

In the year ahead, the Commission will be working on issues of access and quality of medical care for Medicaid beneficiaries. Continuing its consideration of Medicaid managed care, the Commission will review the status of HCFA's policy on quality assurance standards and processes. It will examine whether the policy provides for effective internal quality assurance programs, clarifies appropriate oversight roles of the federal and state governments, and is consistent with quality assurance programs of other payers. If the Commission determines that HCFA's standards and processes are acceptable, it will then consider changes in current Medicaid managed-care policies.

The Commission's work on Medicaid also will explore the development of measures of access that are appropriate to the Medicaid population and that could be used by the states in meeting the requirements of the OBRA89 equal access provision. It plans two projects. The first will look at developing measures based on claims data and will draw on the Commission's work on monitoring access for Medicare beneficiaries. The second will explore the feasibility of developing and fielding an ongoing survey of Medicaid beneficiaries comparable to the Medicare Current Beneficiary Survey. This project would provide information on Medicaid beneficiaries' source of care, access barriers, satisfaction with care, and demographic characteristics.

Other ways for improving access will also be considered. The Commission hopes to learn more about the potential of using nonphysician practitioners as a means of improving access. Topics to be considered include the extent to which state Medicaid programs provide coverage for theservices of nonphysician practitioners, discrimination in the granting of hospital admitting privileges, and payment. Because the Commission's survey of state Medicaid programs did not cover these issues, it may collect additional information before developing policy options. The Commission also plans to evaluate innovative policies implemented by the states to provide better access for Medicaid beneficiaries.

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CHAPTER 7

MEDICAL MALPRACTICE REFORM

In the Omnibus Budget Reconciliation Act of 1990, the Congress directed the Commission to make recommendations regarding medical malpractice reform. The Commission described the goals of the malpractice system and how well they were being met in its *Annual Report to Congress 1991* (PPRC 1991). This year, the Commission offers recommendations that may help pave the way for the malpractice system to realize its goals.

The federal government's interest in malpractice reform derives from the overall aims of health care reform: to limit costs while improving quality and access. An important federal interest is to ensure that Medicare, Medicaid, and the health care system as a whole deliver high-quality care. In theory, the malpractice system should provide a strong external incentive to deliver such care. But in practice, it is difficult to demonstrate the marginal benefit of the system in deterring negligent medical injury. The rates of avoidable injury — particularly among Medicare patients — suggest there is room for considerable improvement.

As a principal payer, the federal government is interested in constraining the cost of health care. The malpractice system affects costs in several ways. It may impose on the health care system a single standard of care that is not cost-effective. In addition, many believe that the current system leads to the practice of so-called defensive medicine, resulting in the widespread delivery of services that are not otherwise indicated. The malpractice system can help or hinder efforts to decrease the amount of unnecessary or unduly expensive care, depending on whether it sanctions the delivery of unneeded care or makes it risky for providers to deliver cost-effective care. Both malpractice insurance premiums and treatment for avoidable injuries contribute to health care costs.

Another federal concern is access to care. The malpractice system can affect access if malpractice insurance is too costly in relation to payments for services, if insurance is unavailable, or if providers decline to deliver high-risk services — or services to high-risk patients — for fear of being sued (Pear 1991).[1]

Although much is not known about medical malpractice, it is increasingly recognized that the performance of today's malpractice system compromises these key federal interests. The problems plaguing the system are sufficiently complex and intractable that piecemeal or limited reforms are unlikely to have a major impact. The Commission has therefore formulated recommendations for federal actions to improve the malpractice system.

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[1] This chapter does not deal directly with issues of access to care, although the Commission's recommendations may affect access by moderating malpractice premiums somewhat.

This chapter sets out a conception of a future malpractice system that would represent a great advance over the current one. This system cannot be implemented immediately, because much developmental work is needed to ensure both its feasibility and affordability. The Commission's recommendations focus on steps that should be taken now to prepare for the future adoption of a system similar to that envisioned here. In addition, the recommendations include interim measures to improve the functioning of the current system. The chapter concludes by discussing the relationship of malpractice reform to cost containment.

RECOMMENDATIONS

The federal government should ensure that practitioners, hospitals, and health care organizations engage in effective efforts to reduce injuries related to inpatient and outpatient medical care, including those due to negligence. These efforts should be assisted by federally sponsored initiatives and additional funds for research.

The Congress should authorize, fund, and facilitate the development and assessment of demonstrations of administrative or other systems for compensating patients for injuries due to medical negligence. The demonstrations should assess features that could be used in a future compensation system to promote fast, efficient, and accurate resolution of claims.

The Congress should support the development and testing of alternative standards for determining compensability. Demonstrations of alternative systems for compensation should include and assess the use of alternative standards when possible.

As part of a package with other reforms, the Congress should effect the widespread adoption of certain tort reforms, including:

- **reasonable limits or schedules for noneconomic damages and attorneys' contingency fees,**
- **thresholds for joint and several liability,**
- **offset of awards for collateral source payments,**
- **periodic payment of large awards,**

- **reduction to a reasonable period of long statutes of limitations for minors, and**

- **encouragement of early assessment of claims and use of alternative dispute resolution methods.**

The Agency for Health Care Policy and Research (AHCPR) should sponsor studies of the effects on patients of malpractice reforms and demonstrations. Funds for malpractice research should be identified separately in AHCPR's budget.

THE TASK FOR REFORM

The Commission described the goals and problems of the malpractice system in depth in its *Annual Report to Congress 1991* (PPRC 1991). The reduction of the rate of medical injury is the most important goal of the malpractice system. Although medical care in the United States is generally of high quality, the incidence of preventable medical injury should be lowered. A second goal of the malpractice system is to compensate patients fairly who experience a medical injury. Too few patients are being compensated today, and the awards are variable. Further, much attention is focused on the unknown but possibly high cost of defensive medicine. Finally, the system is inefficient, resulting in high administrative costs and long delays in resolving claims. These problems, then, are the challenge of reform efforts. Malpractice reform must be informed by an understanding of their underlying causes.

The ability of the current system to reduce the number of injuries is limited by its failure to collect and analyze systematically data with which to design and implement measures to prevent medical injuries. At present, most injuries do not result in claims, and databases are largely fragmented. Knowledge about the causes and prevention of medical injury is scarce. In addition, incentives for providers (including health care workers, hospitals, clinics, and other health care organizations) to participate in formal injury reduction efforts are not as effective as they should be.

Compensation is not consistent, timely, or proportionate to losses. Nor is it available to all who may qualify. The accuracy of determinations of liability is impaired by the difficulty of applying the negligence standard to individual cases. Awards for noneconomic damages, in particular, are highly subjective and variable. Lengthy delays are characteristic of today's legal process.

Cost-effective care may be deterred to the extent that the malpractice system requires the delivery of more expensive care than would be desired by those ultimately bearing its costs. The legal standard of care results from ad hoc decisions of juries, the retrospective opinions of expert witnesses, and professional practices that may be influenced by incentives that increase the delivery of services. Paradoxically, the practices of the health care system may also be driven by its perceptions of possible legal liability.

Defensive medicine represents unnecessary or inefficient care delivered to reduce the risk of liability. Its extent and cost are unknown but may be substantial. Several factors may contribute to defensive medicine. The negligence standard does not provide a good prospective guide to decisionmaking. Furthermore, the application of the standard to individual cases by physicians is unreliable (Brennan et al. 1989) and biased by knowledge of the outcome of care (Caplan et al. 1991). In addition, physicians probably apply the standard differently than do juries. Judgments of liability that are inconsistent across similar cases, made by lay juries meeting one time, may also contribute to defensive medicine. The medical profession's lack of agreement about what care is effective, as well as misperceptions of physicians about the legal standard of care, may also be contributors.

The high administrative costs of the current malpractice system are due to the formal processes for discovery of information, preparation for and conduct of the trial itself, and the use of expert witnesses. These reflect the need for extensive information and understanding that is associated with an inquiry into individual fault. High procedural costs are barriers to filing claims for many potentially compensable injuries, particularly those that are less serious or that entail relatively minor economic losses.

TOWARD A MALPRACTICE SYSTEM OF THE FUTURE

Solving the problems plaguing today's malpractice system will require a new approach to preventing injury and compensating patients. A possible future system that would address the underlying causes of the present system's malfunctioning would have two components. One would be a fast, efficient administrative compensation mechanism that would provide adequate insurance to patients who experience preventable medical injuries. The other would be a parallel structure for monitoring, quality review, and design and implementation of measures to reduce the rate of injury. The key feature of the proposed system is the separation of decisions about compensation and quality of care. Decisions related to each of these areas would be accomplished by a structure and process designed specifically for that purpose.[2] Clear criteria for compensability and for damages awards would be established, whereas judgments about quality of care in individual cases would be made in forums better suited to that function.

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[2] The two parts of this system could be separated in structure as well as function, or they could be housed within a single administrative agency.

The administrative compensation system would provide access for as many compensable claims as qualify, yet place limits on compensation to keep the system affordable. Enhanced access would be achieved by lowering economic and other barriers to filing claims, ensuring legal representation, and helping patients to realize when they have experienced a potentially compensable injury. Injuries would also be detected by data-based surveillance and by encouraging or requiring the cooperation of providers in identifying and reporting potential claims. Nonmeritorious claims would be screened out early, and the overall process would be expedited and efficient. It is possible that an even simpler, less formal process could be instituted for smaller claims.

Compensation would be based on a reliable standard for compensability, such as one involving avoidability of the injury. Accelerated-Compensation Events (ACEs) (described below) offer one possible way to identify prospectively injuries that are usually avoidable with good care. This approach would largely retain a fault basis for compensation but dispense with the need for case-by-case determinations of fault.

The injury prevention/quality improvement system would receive information from the compensation system, its own surveillance mechanisms, and voluntary reporting. It would collect and analyze data on injuries, thereby facilitating the design and implementation of interventions. Insurance premiums would be experience rated, based on the claims experience of the organization or system that would best be able to intervene to prevent injuries. Ideally, this system would be part of a broader continuous quality improvement process throughout the health care system. The system would have an appropriate balance of public and professional input.

Considerable developmental work is necessary for this system to be realized. The system may not turn out to be feasible as described; the discussion here attempts to anticipate, to the extent possible, its structure and operations. The components can be developed in an evolutionary manner and implemented independently. The following sections describe more fully the building blocks that must be put into place. Among these are better systems to prevent injury, an administrative process to award compensation, and a reliable standard for determining compensability.

The Commission's recommendations identify what should be done now to facilitate the development of each component of the future malpractice system. It is worthwhile taking each of these steps to improve the current system. The greatest potential for progress, however, lies in implementing the recommendations in such a manner as to build toward the new system outlined above.

Prevention of Injuries

Quality of care is receiving great emphasis at this time. Continuous quality improvement techniques are being adopted by many health care organizations. The Joint Commission on

Accreditation of Healthcare Organizations is preparing new requirements and methods for hospital quality improvement activities. Peer review now takes place in hospitals and other settings, and Peer Review Organizations evaluate the quality of care given to Medicare patients. These and other activities are concerned in part with negligent medical injuries, but the extent to which they effect reductions in the rate of such injuries is unknown. It is likely that many quality improvement efforts are helpful, but the relatively high rate of negligent injury that still exists suggests that more should be done.

The threat of legal liability provides a general deterrence incentive for physicians to take due care to avoid preventable injury. Although this threat clearly influences physician behavior, it is not clear whether the resulting actions cause any marginal reduction in the rate of injury. In part, this is because the legal system's general incentive for physicians not to be negligent must be translated by individual physicians into the particular ways in which they try to avoid injury. Isolated lapses in vigilance inevitably occur.

A systematic approach to injury prevention is likely to be more effective, by identifying and taking specific actions to reduce the risk of particular injuries. Risk management activities withinhospitals have been shown to be associated with fewer malpractice claims (Morlock and Malitz 1991). Since the general deterrence incentive already exists, specific measures designed to prevent injuries are needed to reduce their rate of occurrence.

There are two aspects of effective injury reduction: collection and analysis of data, and design and implementation of effective interventions. Improvements in these processes should decrease the number of avoidable injuries, independent of other malpractice reforms.

Data Collection. Data usable for injury reduction has come principally from closed claims files of malpractice insurers. Only a small percentage of avoidable injuries is included in such files (Harvard Medical Practice Study 1990); often, the information about each claim is limited. There is also a substantial time lag for claims files to accumulate information, since they depend on the legal process.

Better data clearly are needed to detect preventable injuries and determine their causes. One approach that has been tried is generic screening based on hospital chart review. For example, one screen might be a return trip to the operating room during the same hospital stay. This technique is both expensive and not particularly useful, however (Sanazaro and Mills 1991). Many charts must be reviewed in depth to discover a few preventable injuries, and many injuries still go undetected.

Information necessary to improve screens for preventable injuries is not contained in such existing databases as hospital discharge records, claims files, or medical records. Uniform databases need to be designed that, among other purposes, detect care that is likely to cause injury. It is not yet clear what types of databases would be most useful. Information is needed on processes of care (e.g., whether serum aminoglycoside levels were ordered after an aminoglycoside antibiotic was prescribed), outcomes of care (e.g., whether laboratory tests of renal function revealed kidney damage after a patient received an aminoglycoside antibiotic), and diagnoses (to determine whether certain processes were necessary or outcomes were as expected). Better systems are needed, for example, to detect injuries associated with drugs.[3] Data systems for surveillance need to be established for outpatient care, which is a growing source of preventable injuries. Hospital and office data systems should be designed so that they can be used for this kind of quality monitoring.

Despite its importance, however, data-based surveillance — no matter how well designed — is not sufficient. The best information source concerning care-related problems is the caregivers themselves. Early warning and reporting systems for medical injury have been effective in identifying, soon after their occurrence, many of the injuries that result in claims (Lindgren et al. 1991). It is likely that many of the preventable injuries reported by physicians are not discoverable in the medical record simply by using standard screening techniques. Confidential voluntary reporting of potentially preventable injuries to a hospital or other responsible organization can be encouraged successfully (Brennan et al. 1992). It seems clear that voluntary reporting of injuries, as well as participation in peer review and injury prevention using those data, needs to be protected and encouraged by state and federal law. Mandatory reporting may be less successful, although there is no experience base on which to assess its utility.

Analysis of Data. Once collected, data on injuries must be analyzed to help design interventions. The basic epidemiology of medical injuries needs to be delineated.[4] Methods to describe the etiology and nature of injuries are in their infancy. Coding systems need to be developed to permit this more abstract information to be entered into computerized databases. Because many events need to be collected and analyzed, locally developed databases must be compatible to permit merging.

Design and Implementation of Interventions. After the epidemiology of preventable medical injuries is described and the causes of injuries are understood, ways must be devised to prevent such occurrences. These interventions can be either cognitive or procedural. Many insurers, for instance, believe that continuing medical education sessions on malpractice are so effective that they offer physicians who attend the classes discounts on premiums. Some states and insurers have required physicians to participate in risk management seminars.

Clearly, the education of providers is important: cognitive interventions make sense intuitively to address cognitive mistakes. However, errors that cause injury are often due to isolated lapses that are difficult for individual health care workers to eliminate. In addition, some injuries are caused by problems in health care delivery systems and procedures rather than by an individual caregiver's mistake.

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[3] Although a formal reporting system has been established for adverse drug reactions, they remain underreported.

[4] Relatively simple classification schemes have been used in recent studies (Leape et al. 1991; Kravitz et al. 1991).

Systems or process interventions are likely to be even more effective at preventing injuries than education alone. One successful assessment and intervention program for claims-prone physicians focuses on office organization and practices to reduce the rate of malpractice claims (Frisch 1991). Administrative policies and medical practice guidelines can be designed to minimize the risk of avoidable injury, and checks can be instituted to make sure that policies are followed. Guidelines for intraoperative monitoring of blood oxygen saturation, for instance, have reduced the number of hypoxic injuries during anesthesia (Keenan and Boyan 1991).

Computer-based systems using reminders, flags, and checks have the potential to detect and rectify errors before they result in injury. A pharmacy computer, for example, can detect when one prescribed drug may be contraindicated because of a possible interaction with another, because of the patient's diagnosis, or because the dosage is incorrect. An office computer can generate reminders to patients and physicians about preventive services.

A more sophisticated system might use a practice guideline and a computer-transcribed real-time dictated medical record — a new technology — to prevent physicians from overlooking a critical diagnosis because they simply do not think of it. For example, some myocardial infarctions are missed in emergency departments because the patient presents only with a nonspecific symptom, such as an upset stomach. A practice guideline for the emergency department diagnosis and management of patients with indigestion might have a branch in its algorithm to check high-risk patients for whether a myocardial infarction might be the cause of the stomach symptom. The practice guideline might indicate that patients with indigestion who are over a particular age should be asked about risk factors for coronary artery disease. If a certain number of risk factors are present, an electrocardiogram should be done to rule out a myocardial infarction. The computer would scan the dictated physician note. For any patient of the requisite age with indigestion as the chief complaint, and for whom no mention is made of risk factors for heart disease, the computer would remind the physician to ask about the risk factors and to do an EKG if indicated.

Incentives for Injury Reduction. Efforts to develop and implement interventions need to be encouraged or required. Although physicians have a professional obligation to avoid causing preventable injuries, and the legal system provides a parallel incentive, efforts to reduce the rate of injuries do not appear to be adequate. There are several possibilities for strengthening the incentive. Insurance premium discounts increase participation in risk management programs, but mandatory participation is probably even more effective. Another strong incentive to participate in efforts to prevent injury would be for injuries or claims to trigger peer review.

A final option for strengthening incentives is experience rating: adjusting malpractice insurance premiums based on the insured's claims history. Individual physicians generally are not sued often enough to enable experience rating to closely approximate the risk of the practitioner's being sued in the future (Rolph 1991; Rolph et al. 1991). This is because being sued once or twice, for example, could represent a "chance" distribution of isolated errors rather than an underlying propensity of the physician to cause negligent medical injuries. However, hospitals or appropriately sized groups of physicians are the subjects of sufficient numbers of claims to overcome the problem of chance variation. Therefore, experience rating could be done more accurately for them.

In the outpatient setting, it is not clear what is the best entity to detect injuries and design and implement interventions. Chapters 9 and 10 discuss the possibility of developing local structures to collect and profile data on practice patterns and to facilitate utilization review and quality improvement. These structures could also serve as the locus for efforts to prevent injuries, since they could collect and analyze data and perform a convener role for the development and implementation of interventions.

Enterprise Liability. A proposal called enterprise liability would make hospitals financially responsible for all negligent injuries to inpatients, thereby relieving the medical staff of all personal tort liability for such injuries (Weiler 1991). This would place the burden of injury prevention on an entity — the hospital — that can accomplish this better than individual physicians acting alone. This arrangement already exists for hospitals owned and staffed by one organization (such as a health maintenance organization (HMO) or a typical university or county hospital) and for those that provide ("channel") malpractice insurance to their affiliated staff. Enterprise liability is also the end result of the trend in legal doctrine toward holding hospitals responsible for inpatient care (Weiler 1991).

Whether the incentive afforded by enterprise liability would be sufficient to encourage the level of effort needed to prevent injuries is unknown. External insurance would still, to some extent, cushion the financial incentive felt by a hospital or organization. Individual physicians would be deprived of the incentive derived from the need to purchase their own malpractice insurance. No studies have been performed to compare the rate of injuries or even of injury prevention activities between hospitals that assume full liability for their physicians and those that do not. Nor are there studies comparing hospitals that fully self-insure with those that are more insulated from financial losses by outside insurance. It is possible that certain injury prevention activities need to be required rather than merely encouraged by particular arrangements of incentives. In addition, there are practical difficulties in adjusting malpractice insurance premiums and physician payment to implement enterprise liability.

Incompetent or Impaired Physicians. Most avoidable injuries are experienced by patients of conscientious, competent providers. These injuries are typically caused by systems problems or by isolated lapses in the delivery of care by individuals. In fact, the implication that such errors are due to individual professional incompetence is a principal source of the strength of providers' dislike for malpractice suits and disaffection with the National Practitioner Data Bank. The types of interventions described above are designed to reduce the numbers of such injuries.

At times, however, an impaired or otherwise incompetent practitioner causes a series of injuries to patients. The present malpractice system does not ensure adequate surveillance for these situations, which must be detected and corrected much sooner than the time period over which a series of malpractice claims typically are filed and resolved. State licensing boards, hospitals, and other entities responsible for ensuring that care is delivered by competent practitioners need to receive timely information from systems designed to detect medical injuries. This would permit early intervention to protect the public from further injuries and to help the provider correct the cause of the incompetence, if possible.

Avoiding Defensive Medicine. It is important that efforts to prevent injuries — as well as medical care itself — be cost-effective. Even though there are too few programs in place to reduce injuries, there is a danger that health care resources may be spent inefficiently to reduce the risk of injuries. For example, it would not be advisable for an electrocardiogram to be performed on everyone who comes to an emergency department with indigestion. An incentive to perform inefficient defensive medicine is created when providers bear the financial and other burdens of avoidable injuries, while a third-party payer pays for the services delivered to avoid injuries. Therefore, when practice guidelines are formulated for the purpose of avoiding injuries, the input of payers as well as providers should be sought (see Chapter 8). This cause of overallocation of resources to the prevention of injury can be averted if the party at risk for compensating avoidable injuries also bears the cost of the particular health services provided, as is the case with a self-insured HMO.[5]

The Role of the Federal Government. The federal government should ensure that practitioners, hospitals, and health care organizations engage in effective efforts to reduce injuries due to inpatient and outpatient medical care, including those due to negligence. These efforts should be assisted by federally sponsored initiatives and additional funds for research. A high priority should be given to the development of databases to be used to detect injuries and to support efforts to reduce their incidence.

The Departments of Health and Human Services and Veterans Affairs should mount and evaluate initiatives to improve the reporting and detection of avoidable injuries, analysis of data, and design and implementation of effective interventions. The Congress should provide additional funds to AHCPR to support research on the etiology, classification, and prevention of medical injury; to promote the development of systems to detect medical injury early; and to develop databases to collect information about medical injury that can be used to design effective preventive measures.

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[5] Other causes of defensive medicine, such as judgments of liability that seem incorrect to physicians, would remain.

Alternative Systems for Handling Malpractice Claims

Substantial improvement in the malpractice system can only occur outside the courtroom. Administrative systems and other alternative dispute resolution (ADR) methods offer the potential for improved decisionmaking, faster and more efficient claims processing, and lower thresholds for entry to the system (resulting in increased access). Administrative systems are also capable of using alternative standards for compensation (discussed in the next section). These features are the necessary substrate for a dramatically improved malpractice system.

A number of features of an administrative system are probably needed for it to function better than the court system. The use of an experienced decisionmaker who decides many cases would be a substantial improvement over a jury of lay persons. A jury meets only once, has no personal experience to draw upon in deciding cases, has no access to descriptions of prior similar cases, does not have to justify its decision, and is not accountable for its performance. If decisions (including settlements) were written and accessible, they would likely be more consistent and predictable. Disagreements among cases could be harmonized by an appeals process, and the relevant standard would then be known prospectively by health care providers. An administrative decisionmaker may be more likely to understand and honor the recommendations of good practice guidelines and to condone cost-effective care.

Guidelines for the level of compensation for economic and noneconomic losses would help the system operate in an efficient and consistent manner. In particular, they would help resolve cases of clear liability in which the only contested issue is the amount of damages.

Efficient and speedy processing would permit expansion of the number of claims included in the system and would reduce the cost of legal counsel. The process of deciding claims could be made simpler and faster, but often at the expense of the procedural safeguards currently built into the court system. For example, if more claims are to be given access to the system, early identification of those without merit is essential to constrain administrative costs. In the present court system, by contrast, claims can proceed to trial if they survive a motion for summary judgment. Furthermore, claims that require extensive legal process to uncover their merit may be excluded inappropriately. Nonetheless, the balance between efficiency and procedural safeguards could be struck more reasonably than is now the case with the court system. Methods need to be developed to obtain accelerated disclosure and discovery of information relevant to the claim.

One of the judicial system's most important features is its perceived impartiality and the degree of control accorded the parties over the litigation process. This is especially important to injured claimants, who may feel less powerful than the provider they are suing. In administrative or ADR systems, the decreased amount of formal procedural protection makes the need for objectivity even more important.

Many of these considerations are reflected in existing proposals for administrative systems.[6] In the American Medical Association/Specialty Society Medical Liability Project's proposal, for example, claims would be reviewed initially by claims adjusters and ultimately decided by administrative law judges. Staff attorneys would represent — without charge — patients whose claims have apparent merit. Other features include a mechanism to screen out unwarranted claims early, incentives for settlement, guidelines for calculating damages, and procedural safeguards (Johnson et al. 1989).[7]

The success of administrative systems depends critically on how they are implemented. The participants in the system must be competent and make consistent decisions. The procedural rules must be tested in practice, because how they will be used depends on complex behavioral responses that are difficult to predict. The length of time required to resolve cases, the system's efficiency and ability to improve access for claims, and the objectivity and quality of the judgments cannot be anticipated with confidence.

Demonstrations of Administrative Systems. Although the experiences of several existing types of administrative systems in other contexts can be instructive, there is no working model of an administrative system for medical malpractice. It would be best to initiate demonstrations of an administrative system on a limited basis, to curtail the potential expense and to permit rigorous evaluation. The demonstrations must be carefully planned to overcome practical problems in carving out claims from the tort system. They should ensure that important questions will be answered to pave the way for a vastly different malpractice system in the future. A federal demonstration could involve defined populations such as Medicare, Medicaid, or Federal Employee Health Benefits Plan enrollees within a geographic area.

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[6] Halley and others have proposed an administrative system modeled after workers' compensation that incorporates many similar procedures. This proposal would also change the standard for compensation from negligence to no-fault (Halley et al. 1988). The Physician Insurers Association of America also has developed a model administrative system. It should be noted that administrative systems can use a negligence standard for determining compensability (as the AMA proposal does) or any alternative standard, such as the ones discussed in the next section.

[7] The proposal also would change substantive legal rules (including the standard for liability) and establish a board to oversee the claims resolution system and carry out credentialing, monitoring, education, and discipline of physicians (Johnson et al. 1989).

A demonstration would hold costs down if it substitutes the administrative process for the tort system. This would allow a test of how well the administrative system works in handling cases that are now resolved in the court system. Either recourse to the courts could be foreclosed, or strong incentives not to use the court system could be instituted.[8] The latter could include, for example, a requirement that all cases be pursued first in the administrative system. Decisions could be appealed to the courts for limited or full review, but with the proviso that if the outcome were not substantially different, the losing party would pay the winner's legal costs for the appeal. Alternatively, the administrative decision could establish an affirmative defense or presumption that must be overcome by the party challenging the decision.

To achieve the different malpractice system of the future envisioned earlier, however, greater access for claims will need to be obtained by the elimination of entry barriers. Inviting more claims would raise the cost of the system, however. To minimize the additional cost, the demonstration could apply only to smaller claims. This would intrude minimally on the present system yet provide experience with an administrative system that could later be expanded. Medicare could usefully serve as the basis for a small demonstration administered by the Health Care Financing Administration, since Medicare patients have reduced access to the present system because of their low expected awards combined with the contingency fee system.

To help prepare for a future injury compensation system, demonstrations could usefully assess the feasibility and value of the following features:

- decisionmakers who are impartial and experienced;
- written justifications for decisions that are accessible for use in future cases;
- a faster, flexible, abbreviated process;
- incentives for settlement;
- foreclosure or strong discouragement of use of the court system; and
- guidelines for determining the level of economic and noneconomic damages.

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[8] Kaiser Permanente has required in its contracts with employers that injured patient-employees must seek redress with binding arbitration. The California State Supreme Court ruled that patients are bound by these contracts, because the contracts were between parties of relatively equal bargaining power (such as an employer and an HMO) and substantive rights were not affected (Weiler 1991).

Alternative Standards for Deciding Compensability

The negligence standard does not appear to be a good guide to decisionmaking by providers and juries. It is possible that more reliable standards for liability could be developed. Such standards must be tested for their reliability and their effects on number of claims paid. This section discusses the potential of deciding compensability based on no-fault, avoidability (including accelerated-compensation events), and practice guidelines.

No-Fault Liability. A no-fault standard would compensate patients whose injuries were caused by medical care, regardless of whether the care was substandard or not. The determination of eligibility for compensation would be simplified by dispensing with the need to determine the standard of care and whether it was breached. Evidence from one study suggests that judgments of causation can be made more reliably than judgments of negligence, although some difficulties would remain because the adverse effects of treatment must be distinguished from the underlying illness (Brennan et al. 1989). Further, it would not be desirable to compensate losses from predictable adverse outcomes from treatment, yet it is difficult to formulate a decision rule to exclude them.

No-fault systems have been instituted in other countries, most notably Sweden (Rosenthal 1989). These systems are probably not transplantable to the United States in as much as the contexts are quite different. Awards are modest in Sweden because social insurance systems largely pay for health care and lost earnings from disability; 70 percent of payments are for pain and suffering. The total cost of the Swedish system is only about $2 per citizen per year, and administrative costs are only 18 percent. Claims are handled quickly and efficiently by insurance adjusters. In the United States, the greater amounts of money at stake would probably necessitate more involved and expensive legal process.

The principal drawback to a no-fault system is the vast number of injuries that would be eligible for compensation. Awards would have to be restricted to keep the system affordable. In estimating the cost of a hypothetical no-fault system in New York, for example, the Harvard Medical Practice Study investigators restricted compensation to net economic losses experienced more than six months after the injury, with no noneconomic damages permitted (Harvard Medical Practice Study 1990). In addition, the experience overseas is that, with a no-fault system, the number of claims increases steadily (Rosenthal 1989). A no-fault system does not appear to be a practical option in the U.S. at this time.

Avoidability. Some errors in care are not negligent. For example, a mistake in considered professional judgment is often deemed not to be negligent. Whereas in hindsight the injury might have been preventable, having missed the opportunity to avoid it is not considered negligence. It may be easier to determine whether an injury was avoidable — by some measure of probability — than whether failure to avoid it was due to negligence.

A standard based on avoidability is appealing because it compensates patients for injuries that need not have occurred. Fewer claims would be compensated than under no-fault, which could keep the system affordable. For example, a particular treatment may entail a known but unavoidable risk of a serious injury or complication. Patients who experience an adverse outcome from the treatment would be compensated under a no-fault system, but not under a standard based on avoidability. However, more claims would qualify for compensation under an avoidability standard than under a negligence standard.

An avoidability standard offers other advantages as well. It shares with no-fault the advantage of not requiring a judgment about whether the care was substandard. Compensation for an injury would not itself mean that the care was negligent. That determination would need to be made through another mechanism. Separating the compensation decision from judgments about quality of care could reduce defensive medicine practices and improve providers' confidence in the system. At the present time, there is no information on the reliability of such a standard, but it is likely to be more reliable than that used to determine negligence. In particular, with improved knowledge about the effectiveness of treatment, a standard based on avoidability should become even more reliable (see Chapter 8). Further work is needed to develop and test such an approach.

The accelerated-compensation event (ACE) proposal is an attempt to make an avoidability standard clear for certain injuries (Tancredi and Bovbjerg 1991; Bovbjerg et al. 1991). ACEs comprise a list of avoidable adverse outcomes of care that are designated in advance to be compensable. If an injury falls within the definition of an ACE, it will automatically be compensated without legal process — preferably according to a schedule of damages. ACEs can be derived from judgments about what adverse outcomes are avoidable with good care more than a specified percentage of the time. Examples might include complications from a foreign body (e.g., a sponge or hemostat) unintentionally left in any operation site, complications from inadvertent laceration of the bladder during a hysterectomy, or complications from failure to diagnose and treat low blood sugar in a newborn. ACEs are closely related to fault, since occurrence of a usually avoidable outcome is probably due to substandard care some proportion of the time. However, no determination of fault is made in any individual case.

Because claims that involve ACEs would not require case-by-case determinations of liability, it is thought that they would be resolved faster, more efficiently, and more consistently. Prevention of injuries could be furthered by dissemination of the list of ACEs, and patients and others would be better able to recognize an injury that qualifies for compensation. Databases could be designed so that ACEs could be better detected and their incidence monitored. Administrative savings would occur because there would be no contested determination of liability involving lawyers. There would be no need to determine anew in each case whether a given injury was caused by negligent care.

With this system, there may also be less defensive medicine, since for ACE injuries only the outcome — not the process — of care is relevant. Fault would not be determined in each case, so the stigma of a finding of negligence would not be attached to compensation. Another mechanism would be needed to review quality of care.

Not all negligent injuries could be encompassed by ACEs, but it seems that most could be. One study of 285 obstetrics claims found that 52 percent (and 68 percent of paid claims), would have been included in a list of 48 obstetrical ACEs (Bovbjerg et al. 1991).

Since an ACE system has never been implemented in actual practice, its feasibility should be tested first on a small scale. ACEs could be used in conjunction with an administrative system demonstration project, or they could be "carved out" from the court system. A comprehensive list of ACEs need not be implemented at once. The demonstration should permit measurement of the effects of an ACE system on the cost and number of claims.

Practice Guidelines. One possibility is to use practice guidelines to define the standard of care to be delivered (see Chapter 8). This may be important to make providers confident that they can deliver cost-effective care without being second-guessed. Conversely, if the practice guideline were not followed (without justification), the provider would be liable for injury that would have been prevented had the guideline been followed. The standard of care would thus be more clearly defined, although questions can often be raised about the applicability of a practice guideline to a particular patient. The guidelines must be flexible to accommodate differences among patients and in available resources. Guidelines that define the standard of care should be valid and reliable.

Although practice guidelines can help rationalize how cases are resolved by the malpractice system, they apply only to a minority of claims that are being brought at this time (Garnick et al. 1991). Few of the injuries that now result in claims would have been prevented by following the types of guidelines currently being developed, which identify the effectiveness and cost of different approaches to treatment. For example, technical errors in the performance of a procedure or operation would not be covered by an existing practice guideline. Other standards must be used to decide cases that are not covered by guidelines.

Nonetheless, guidelines for cost-effective treatment could help ensure that payers and providers who adopt them can deliver such care with confidence.[9] Moreover, if practice guidelines were developed with the prevention of injuries as an objective, they could be useful in deciding cases as well as preventing injuries. For example, hypoxic injuries during anesthesia have been successfully reduced by guidelines for intraoperative monitoring, which were developed specifically to prevent such injuries. These guidelines have now become the standard of care.

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[9] It is not known how well the present malpractice system will protect providers who follow good guidelines (Hall 1991). Maine is legislatively permitting specified practice guidelines to be used as a defense in malpractice claims (Bankhead 1991).

Tort Reforms

Conventional tort reforms comprise procedural and substantive changes in the rules governing malpractice claims in the legal system. In the past 15 years, every state (except the District of Columbia) has enacted some type of statutory reform of its malpractice litigation system, and tort reforms are part of most congressional bills introduced on malpractice (Spernak and Budetti 1991;Table 7-1). This section discusses various tort reform proposals and makes recommendations concerning their adoption.

Tort reforms are intended to improve incrementally the workings of the present tort system. In doing so, however, the number and size of claims paid by the malpractice system would decrease. This probably would reduce malpractice insurance premiums in many states, but it would not in itself resolve the major problems of the malpractice system. However, tort reforms could help make the tort system somewhat more efficient and consistent until more fundamental changes are made, and they could be adopted immediately. In the short run, these changes can be beneficial for the health care system as a whole.

In addition, some tort reforms are necessary steps toward the malpractice system of the future outlined earlier in this chapter. Limits on noneconomic damages are necessary for a system to compensate many more claims without raising the total of payments too much. At the extreme, to hold down the cost of a proposed no-fault system that would compensate many claims, the Harvard Medical Practice Study investigators would completely exclude noneconomic damages from payment (Harvard Medical Practice Study 1990).

If tort reforms were enacted in isolation, however, their benefits would come at the expense of injured patients. Awards would be reduced, and access to legal representation for some potential claims would be hindered by strict limits on damages and contingency fees. Access could be preserved by including reasonable attorney's fees as an element of economic damages, but this would create an incentive for claimant's lawyers not to settle cases early. Strong incentives for settlement would be necessary to prevent excessive litigation (Weiler 1991). Tort reforms should ideally be adopted as part of a package of reforms that include expanded access to a well-functioning alternative compensation mechanism, better prevention of injuries, or other measures that would benefit patients.

Malpractice legislation has traditionally been the province of the states. The rising federal interest in malpractice reform has led many to conclude that federal action is justified, even at the price of entering an area previously reserved to the states. Tort reforms have been enacted inconsistently by the states. It is unlikely that they will be adopted uniformly, and some tort reforms have been declared unconstitutional by some state courts. For tort reforms to be implemented across-the-board, either federal preemption of state law is required, or states need strong federal incentives to adopt the reforms.

TABLE 7-1. Examples of Medical Malpractice Legislation Introduced in the 102d Congress

	S. 489, H.R. 1004 (Hatch, Johnson)	S. 1123, H.R. 3037 (Administration bills)	S. 1232, H.R. 3857 (Domenici, McMillan)
TORT REFORM			
Incentives for adoption of reforms	federally **mandated** reforms	economic **incentive/ disincentive** program[a]	**mandatory** for beneficiaries of federal health programs[b]
Cap on noneconomic damages	$250,000	$250,000	$250,000
Collateral sources offset	yes	yes	yes
Eliminates joint and several liability for noneconomic damages	no	yes	no
Periodic payments for awards over $100,000	yes	yes	yes
Other tort reforms	contingency fee limits; maximum 4-year statute of limitations (except for children and undiscovered injuries)[c]	none	punitive damages awards given to state agencies to monitor and discipline health providers
ALTERNATIVE DISPUTE RESOLUTION (ADR)			
Incentives for adoption of reforms	provides **grants** to states to develop and implement a variety of ADR systems	uses **incentive/disincentive** program[a] to foster mediation and pretrial screening[d]	**mandates** that beneficiaries of federal health programs use binding arbitration for claims
INJURY PREVENTION, QUALITY IMPROVEMENT, AND LICENSING			
Incentives for adoption of reforms	strong economic **incentives**[e]	economic **incentive/ disincentive** program[a]	federally **mandated** reforms
Injury prevention/quality assurance programs	states must require health care providers to institute patient safety monitoring systems and liability insurers to mandate insureds' participation in patient safety programs	requires states to implement or mandate quality improvement and risk management programs	directs HHS to establish criteria to certify practice guidelines
Physician licensing, credentialing, and discipline	requires states to allocate provider fees to licensing and disciplinary activities, and to authorize and protect from antitrust law medical societies' participation in provider review	requires states to improve physician oversight through state medical boards and mandate that sanctioned physicians obtain education in areas found deficient	requires arbitration panels to provide state and federal licensing and disciplinary agencies with standardized information on medical injuries
LIABILITY INSURANCE			
Creates separate risk retention group for Community/Migrant Health Centers (C/MHCs)	funds feasibility study and provides capital (if feasible) for C/MHC risk group	no	no

[a] This program would create two incentive pools by withholding a percentage of 1) Medicaid administrative expense payments to state governments and 2) Medicare payments to hospitals. Funds from the Medicaid withholding pool would be divided among states that have implemented the necessary reforms. Funds from the Medicare withholding pool would be used to increase payments to hospitals in complying states.

[b] This includes beneficiaries of any federal health program (such as the Medicare, Medicaid, federal employees health benefits, Veterans Administration medical, and Public Health Service programs), or of any tax-deductible employer-provided health plan.

[c] Claims must be filed within 2 years of when the injury should reasonably have been discovered or 4 years from the injury, whichever is later. Children under age 6 would have until their 10th birthday to file claims.

[d] The *President's Comprehensive Health Reform Program* (February 1992) also supports specific reforms in state contract law and federal rules of civil procedure to persuade or require parties to use ADR.

[e] States would be required to adopt the specified reforms as a condition of receiving funds under the Public Health Service Act (Hatch bill), or as a condition of being granted the authority to certify Medicare providers (Johnson bill). Grants would also be made available to help states improve their ability to monitor and discipline health professionals.

A third alternative is to authorize the adoption of reforms by private contract (Havighurst 1989; Bovbjerg and Havighurst 1986). For example, an employer could contract with an HMO for its employees' health care, with the proviso that injured employee-patients would forgo any noneconomic damages over a certain cap. The private contract method would not ensure the widespread implementation of tort reforms, but presumably their effects would be limited to patients and providers who agreed to adopt them.

The Commission favors certain tort reforms in conjunction with other reforms that will benefit patients. The following is an analysis of the merits of proposed tort reforms. As reforms are implemented, it will be important for AHCPR to fund studies of the effects of the reforms on patients' rate of claims, access to legal representation, and compensation for injuries.

Limits on Noneconomic Damages. Much of the unpredictability and inconsistency of malpractice awards is due to noneconomic damages (i.e., pain and suffering), which constitute about half of total payments (Metzloff 1991). Such damages are highly subjective. Reducing this unpredictability and removing the open-ended nature of these damages would probably improve decisionmaking during the course of a lawsuit.

Awards for noneconomic damages should be rationalized by reasonable limits or schedules for noneconomic damages. Almost half of the states have no statutory limits on noneconomic damages, so universal adoption of this reform could have a substantial effect.

Limits on Economic Damages. Economic losses include tangible monetary losses or expenses like lost earnings and medical and rehabilitation expenses. Absolute caps on economic damages are difficult to justify under the current tort system, since they disadvantage injured patients with tangible losses greater than the cap. Few states now limit economic damages, and some state courts have found such caps unconstitutional. The Commission does not recommend limits on economic damages. Instead, attention should be paid to developing more accurate methods of calibrating losses, including better appraisals of medical, rehabilitative, and other needs.

Limits on Punitive Damages. Punitive damages are rarely indicated in medical malpractice cases. Excessive or unjustified punitive damages awards do not appear to be a problem in medical malpractice cases (Metzloff 1991).[10] Much attention is being paid to punitive damages in other tort contexts in which they are allegedly more egregious. The Commission defers consideration of punitive damages to reform efforts for the tort system in general.

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[10] Punitive damages appear to be asserted far more often than they are awarded in medical malpractice cases (Metzloff 1991). If this is thought to be deleterious, requests for punitive damages could be discouraged or prohibited.

Modification of the Collateral Source Rule. The collateral source rule prohibits consideration of other payments, such as those from health or disability insurance, a claimant may receive in compensation for losses due to an injury. Nearly half of the states have not modified the collateral source rule, permitting duplicate payments for a given loss. An offset of malpractice awards for collateral source payments is consistent with the compensation function of the malpractice system (although in theory it weakens general deterrence of injuries because their full cost is not borne by the provider). Offsetting awards for collateral source payments is advisable under the present tort system. It would be vital to the affordability of the internal costs of a future, more-inclusive administrative system.

Restrictions on Joint and Several Liability. In cases with more than one defendant, the doctrine of joint and several liability holds any defendant responsible for the full award if any other defendants cannot pay their shares apportioned by fault. The purpose of this rule is to ensure adequate compensation for the injury (even though it provides an excessive deterrence incentive to defendants who have to pay more than warranted by their share of fault). Thirty-one states have placed restrictions on joint and several liability. Some have adopted a threshold of degree of fault below which joint and several liability does not apply; others have abolished joint and several liability entirely for noneconomic damages.

Practitioners and entities with adequate resources to pay malpractice awards do not like to be made responsible for the full amount of an award when their contribution to fault is minor or negligible. But it should be recognized that limits on their liability may come at the expense of adequate compensation of injured patients. The Commission recommends that a balance be struck by limiting joint and several liability for noneconomic damages only or by adopting thresholds for the application of joint and several liability. For hospitals and other health care organizations that deliver care directly, however, enterprise liability could be approximated somewhat, if desired, by maintaining full joint and several liability for injuries caused by defendants who are part of the enterprise.

Periodic Payments of Large Awards. More than half the states require larger awards to be paid in installments over time. It is best if the payments are tailored to meet specific future needs. An annuity can be purchased to meet continuing needs from permanent injuries. Annuities also permit tax-advantaged investment of an award. Overall, the Commission considers periodic payment beneficial.

Limits on Attorneys' Contingency Fees. The typical contingency fee paid to the claimant's attorney out of the award is about one-third of the recovery. The purpose of limiting contingency fees is to better approximate the fee to the work performed by the lawyer. About half of the states have restricted contingency fees in some manner, including 11 that have enacted specific fee schedules or sliding scales based on the amount of the recovery. It is possible that fee reductions may restrict access to legal representation for some claimants with less-than-certain recoveries, although this effect may be minor if the reductions apply only to large recoveries. In addition, it may be good to discourage claims with little chance of success that are pursued simply because the potential attorney's fee is unreasonably large. The Commission recommends reasonable limits or schedules for attorneys' fees to direct a greater proportion of a large award to the patient.

Perhaps a better method of approximating claimants' attorney fees would be to base the fee on the progress of the lawsuit rather than on the total award. The amount or percentage would increase as the lawsuit progressed through trial. Because this would create an incentive for a claimant's lawyer not to settle cases early, the change must be accompanied by measures to encourage settlement.[11]

Reductions in Statutes of Limitation. These laws limit the time period, after an injury is or should have been discovered, during which claimants may file a lawsuit. If the allotted period expires, a claim is barred even if it is meritorious. Most states allow a longer time period for minors, often until the age of majority. Long statutes of limitation create uncertainty, delay, and expense in insuring against malpractice claims. The principal sources of problems concern birth injuries. Eight years is undoubtedly a safe period to allow detection of perinatal injury, and shorter periods are defensible.[12] States that have longer statutes of limitations for minors should be encouraged or required to reduce them to eight years at most.

Shifting of Legal Expenses to the Losing Party. In the English system, the losing party pays the winner's legal costs. This should not be adopted in isolation in the United States, because it would deter many potentially valid claims. However, in conjunction with a good alternative dispute resolution option, shifting of legal expenses could serve to encourage use of the ADR system. For claims decided in a nonjudicial system, unsuccessful appeals to the court system could be discouraged by shifting to an unsuccessful appellant the opposing side's legal costs. Shifting legal expenses could also be used to strengthen incentives for settlement in the current court system or with ADR systems.

Screening Out of Nonmeritorious Claims. Claimants' lawyers have an incentive to screen out claims that are unlikely to result in payment. However, some believe that nonmeritorious claims are brought to gain a small nuisance value settlement. Often it can be difficult to discern at a case's inception whether it has merit, because key information can be lacking and must be obtained through the legal process.

Pretrial screening panels have been used to act as barriers to nuisance suits and to provide early determinations of whether cases have merit. Experience with pretrial screening panels has been mixed. Their success appears to depend on how they are designed and implemented, and whether the pretrial decisions are admissible as evidence in subsequent litigation. If carried out properly, pre-trial screening can be beneficial. In Maryland it seems to have had a positive impact, but in other states screening panels have merely added delay and expense to an already inefficient process (Morlock 1990).

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[11] For example, the parties could be required to exchange offers of settlement. If the final outcome is not an improvement over a settlement offer previously refused, attorney's fees subsequent to the refusal could be paid by the party that refused (Metzloff 1991).

[12] Evidence indicates that cerebral palsy is usually diagnosable by three years of age, and difficult cases can be diagnosed at age five (Stanley and Watson 1985).

Other early interventions are more promising. For example, court-ordered arbitration, mediation, and other ADR techniques are likely to be more efficient than screening panels. A variety of innovations should be tested.

MALPRACTICE REFORM AND COST CONTAINMENT

Part of the national interest in health care cost containment is centered on reforming the malpractice system. This section analyzes the potential for malpractice reform to help contain health care costs.

The widespread implementation of tort reforms would reduce malpractice insurance premiums — and thus health care costs — in states that have not enacted the full panoply of such reforms. Compared with the growth in overall health expenditures, however, this effect would be relatively minor. Improvements in the malpractice system are more likely to achieve substantial cost savings in three ways: by reducing the number of avoidable medical injuries; by curtailing the amount of inefficient or inappropriate defensive medicine; and by helping to support the delivery of effective, efficient care. The substantial reforms outlined in this chapter could ultimately lead to a system that could contain costs in all three ways. By contrast, conventional tort reforms alone would likely contribute to cost containment primarily by lowering malpractice insurance premiums.

Avoidable Medical Injuries

Substantial reduction of medical injuries would require the improvements in databases, detection methods, systematic interventions, and incentives that are described above. In particular, better data about the causes and incidence of medical injuries are essential to the success of prevention efforts. Reforms that improve data collection would thus be helpful. ACEs could identify in advance what injuries are avoidable and qualify for compensation, which may prompt providers to take actions to avert such injuries. Practice guidelines could help prevent injuries if they were constructed for that purpose.

The general deterrence threat of today's malpractice system is much less important to further reductions in injury than are the more specific measures discussed here. Theoretically, deterrence could be strengthened if ADR and tort reforms make liability decisions more consistent and consonant with medical judgments. However, improvements in claims processing may paradoxically weaken deterrence by reducing the likelihood and burdens of being sued.

Defensive Medicine

The extent, cost, and causes of defensive medicine are speculative, making it impossible to predict with certainty how various malpractice reforms would affect them. Dramatic improvements in the performance of today's malpractice system are necessary to reduce substantially the practice of defensive medicine. That conventional tort reforms would substantially affect the possible causes of defensive medicine is doubtful. Tort reforms probably do not sufficiently reduce the probability and burdens of being sued to cause physicians to alter their suit-avoidance behavior. In addition, tort reforms neither provide better prospective guides to decisionmaking nor make judgments of liability more accurate. In states like California that have already put in place significant tort reforms, there is no reason to believe that defensive medicine has substantially lessened.

Administrative systems could potentially lessen defensive medicine if malpractice decisions are seen as more accurate. The greatest potential for improvement is the development of better prospective guides to decisionmaking, along with a malpractice system that will support their use by physicians and other providers. Such guides could include practice guidelines that identify good, cost-effective care and a more predictable liability standard for malpractice cases. Another useful change would be the separation of compensation decisions from judgments about quality of care, as would occur with ACEs and other quasi-no-fault standards. If quality of care were judged by a peer review process in which physicians had confidence, and injuries were compensated without a case-by-case determination of individual fault, there would be less reason for physicians to practice defensive medicine.

The uncertainty about the extent and cost of defensive medicine makes it unwise to justify malpractice reform — particularly tort reforms — on the grounds that it will save substantial amounts of money by reducing such practices. Even if the amount of defensive medicine is substantial, reducing it is a long-term project requiring fundamental reform. The public policy debate would benefit from better information, and the Congress should appropriate funds to AHCPR to sponsor research on defensive medicine.[13]

Appropriate, Cost-Effective Care

A major goal of health care reform is to promote the delivery of appropriate, cost-effective care. Practice guidelines could be an important tool in this task (see Chapter 8). Useful practice guidelines will identify acceptable treatment approaches. For practice guidelines to be used effectively, patients, providers, and payers need to have the discretion to choose cost-effective approaches. The malpractice system could limit this discretion to the extent that it requires the delivery of more intensive and less cost-effective care. There is reason to believe that the operation of the legal system has resulted in the widespread adoption of inefficient standards of care (Havighurst 1991). Close attention should be paid in the future to methods of ensuring that the malpractice system does not prevent practice guidelines from addressing this problem.

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[13] The Office of Technology Assessment is undertaking a relatively small study of defensive medicine, but more comprehensive studies are needed.

Providers must be confident that they will not be penalized for delivering appropriate, cost-effective care. An administrative system of compensation for injuries that uses experienced decisionmakers and refers to prior published decisions may be more likely to support care that is consistent with well-constructed practice guidelines. Maine has legislated that certain practice guidelines are introducible in court to establish the standard of care, but only by the defense (Bankhead 1991). Other approaches may need to be devised for ensuring that the malpractice system and practice guidelines are mutually supportive, such as a shifting of presumptions or burden of proof, or the formal adoption of guidelines by private contract.

The goal of making health care more appropriate and cost-effective requires a coordinated effort on many fronts, including malpractice. Taking the steps to move toward the malpractice system of the future envisioned in this chapter would contribute greatly to making health care reform successful.

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CHAPTER 8

DEVELOPING PRACTICE GUIDELINES TO IMPROVE QUALITY AND CONTAIN COSTS

Practice guidelines can play a key role in efforts to improve the value of health care: patient outcomes achieved for resources spent. By identifying when services are beneficial — and when they are not — guidelines can help patients get the care they need and prevent exposing them to the risks of unnecessary services. Guidelines can also support cost containment efforts by reducing unnecessary care and by providing information on the benefits, risks, and costs of services. Such information can help patients, physicians, payers, and others make appropriate choices in an environment of constrained resources. Without information from guidelines, attempts to contain health care costs may inadvertently reduce the delivery of necessary as well as unnecessary services.

In 1989, the federal government made practice guidelines an important component of health care reform. To ensure that guidelines were available, it created the Agency for Health Care Policy and Research (AHCPR). The new agency was directed to sponsor practice guideline development and to conduct research on medical outcomes to provide information needed for future guidelines. The government provided separate funds for these activities. To encourage the medical profession to strengthen efforts to reduce inappropriate services, it also placed physicians collectively at financial risk for the volume of services provided to Medicare beneficiaries through the mechanism of Volume Performance Standards. The development and dissemination of practice guidelines was seen as a vital tool to help physicians respond effectively to the need to control costs.

Since that time, significant progress has been made in the development of practice guidelines. AHCPR has initiated work on 16 guidelines, issuing the first (on the management of acute pain) in March 1992. Other public and private organizations are devoting considerable time and resources to produce guidelines. The Institute of Medicine (IOM), David Eddy, and others have published comprehensive analyses of guideline attributes, development, implementation, and evaluation, from which the Commission's work has benefited greatly (IOM 1990, 1992; Eddy 1990a-e).

In reviewing what has been accomplished so far, the Commission has identified three areas that need more attention. The first involves the role of practice guidelines in addressing costs. Guideline developers have necessarily been concerned with formulating effective approaches to care. But they have paid less attention to how guidelines can also be used to help control the costs of care. While some aspects of the explicit treatment of costs are controversial, the

Commission is concerned that the potential benefits of guidelines are being compromised by insufficient attention to how they can contribute to cost control as well as quality improvement.

In the Commission's view, guidelines can and should be constructed to help address costs without requiring their developers to make value-laden decisions on the trade-offs between costs and benefits of services to patients. Guideline development should be focused on topics which changes in practice have the greatest potential to reduce the amount of resources being spent on unnecessary services. Guidelines on the use of individual services, that is, service guidelines, deserve greater emphasis. Additionally, guidelines should incorporate elements that will enable them to be used in different ways to help improve the value of care delivered.

The elements that should be incorporated in guidelines include explicit statements of the desired patient outcomes resulting from use of the guideline; appropriate clinical measures and targets to guide therapy; and the benefits, risks, and costs of different approaches to care. Additionally, guidelines should contain statements on adjustments for important differences among patients and in the local availability of health care resources; inappropriate indications for services; indicators of processes and outcomes of care for monitoring the use of guidelines; and the knowledge, skills, and resources required to provide the care addressed by the guideline.

The second area concerns the use of existing guidelines. Recent experience shows that the development of guidelines by rigorous processes is lengthy and expensive. In view of the pressing need to improve care and contain costs, attention must be given to getting the most out of the numerous guidelines that have already been produced. Existing guidelines need to be assessed so that those that are likely to be useful can be endorsed and widely disseminated.

Third, greater emphasis should be placed on ensuring that future guidelines are valid and developed efficiently. Guidelines can be formulated using various methods that require a wide range of time and resources. Given the limitations of both, research is needed to determine which aspects of the development process are essential to the guideline's validity and which are not. The validity of guidelines — and whether they are worth the effort to produce and use them — must ultimately be decided by studying whether they improve health outcomes and reduce costs in actual practice.

RECOMMENDATIONS

Practice guidelines should be constructed to help improve the value of health care by addressing its cost as well as its quality. The Agency for Health Care Policy and Research (AHCPR) should give greater priority to developing

practice guidelines — covering services as well as conditions — that could potentially reduce the amount of resources spent on unnecessary medical care. AHCPR should specify the elements that should be incorporated in guidelines so that they can be used to improve both the effectiveness and efficiency of care. All federally sponsored guidelines should be required to contain these elements to the greatest extent possible.

The Agency for Health Care Policy and Research, in conjunction with other public and private organizations with interests in guidelines, should establish a practice guidelines clearinghouse. This clearinghouse should collect all available practice guidelines as quickly as possible, develop and apply criteria to determine which guidelines are likely to help improve the quality and control the costs of care, and disseminate such guidelines widely.

The Agency for Health Care Policy and Research should fund research to identify the most effective and efficient methods of producing valid practice guidelines. The Department of Health and Human Services (HHS) — including AHCPR, the National Institutes of Health, the Centers for Disease Control, and the Health Care Financing Administration — should fund, conduct, and coordinate research to provide the types of clinical information needed for guidelines. HHS should fund and facilitate research on whether guidelines help improve patient outcomes and control costs in actual practice.

This chapter delineates how efforts to develop and use practice guidelines could be enhanced. It begins by presenting a framework for thinking about the types and structure of practice guidelines, which illuminates how practice guidelines can be constructed to help control costs as well as improve quality. Using this framework, the progress of efforts to develop guidelines is described. Methods to produce and evaluate guidelines are then discussed. Based on this analysis, the final section recommends how efforts to develop and use guidelines could be better directed so that valid, useful guidelines will be available in the short and long term.

DEVELOPING GUIDELINES TO PROMOTE EFFECTIVE AND EFFICIENT CARE

Practice guidelines can contribute to cost containment in many different ways. Some are concerned that if guidelines consider costs explicitly, certain effective approaches to treatment may be foreclosed. But there are ways for practice guidelines to influence the costs of care without making these types of value judgments. This section examines some of the less controversial ways that practice guidelines can promote cost containment, identifying characteristics that would enable guidelines to help accomplish this goal.

The section begins by describing three types of guidelines: diagnostic, management, and service. It then discusses how to formulate the elements of diagnostic and management guidelines. The uses of service guidelines are described, and the choice of topics for developing all three types of guidelines is then addressed. The section concludes by discussing how guidelines can facilitate not only clinical decisionmaking, but also other uses that can help ensure that effective and efficient approaches to care are translated into practice.

Types of Guidelines

Practice guidelines can be organized in three ways, focusing on diagnosis, management, or the use of individual health care services.

> **Diagnostic guidelines** are targeted at evaluating patients with particular symptoms (such as chest pain) for the presence of diseases that would benefit from intervention (such as angina or esophagitis). They are also used to guide the screening of asymptomatic populations for early stages of disease (to detect, for example, hypertension or diabetes).
>
> **Management guidelines** cover the evaluation and treatment of patients who are known to have certain conditions. Examples are guidelines dealing with low back pain or benign prostatic hypertrophy.
>
> **Service guidelines** are organized around particular diagnostic and therapeutic procedures (such as chest X-ray, colonoscopy, appendectomy, or administration of hepatitis vaccine), presenting appropriate and inappropriate indications for their use. In a sense, service guidelines collect in one place information from all of the diagnostic and management guidelines in which a particular procedure is used.

Diagnostic and management guidelines are particularly valuable for clinical decisionmaking, since patients usually seek medical care to receive preventive services, to identify the underlying cause of certain symptoms (and obtain relief from them), or to be treated for previously diagnosed conditions. Service guidelines are useful in deciding whether a particular treatment or test should be administered.

Formulating the Elements of Diagnostic and Management Guidelines

Diagnostic and management guidelines have three basic elements: a desired patient outcome, short-term clinical measures and target values that correlate with this desired outcome, and specific approaches for achieving both the target and the outcome. Practitioners and patients can make more informed decisions about the goals of care and choose more efficient strategies for treatment if both costs and effectiveness of care are considered when guideline developers formulate these elements.

Desired Patient Outcome. The desired patient outcome — the ultimate goal of a practice guideline — is the improvement in functional status, morbidity, or mortality expected from following the course of action described in a guideline. A hypertension guideline, for example, would express these benefits in terms of lowered morbidity and mortality from coronary artery disease, renal disease, stroke, and other diseases, which can be achieved by successful treatment of hypertension.

Practice guidelines recommending medical intervention should probably be developed only if evidence suggests that intervention would make a meaningful clinical difference. In other words, there should be reason to believe that detecting a disease, managing it properly, or using a specific procedure to diagnose or treat it would substantially improve outcomes that are important to patients. If, however, the evidence suggests that one or more of the options for evaluation or management is not effective, guidelines should make this clear, discouraging unnecessary provision of services.

Clinical Measures and Target Values. In practice, desired patient outcomes are frequently achieved through short-term goals, or clinical targets, that are directly amenable to medical intervention. For this reason, guidelines should identify clinical measures for practitioners and patients to monitor (usually a symptom, physical sign, or laboratory test) and specific target values for which they can aim (such as a target range of blood pressure).

The overall cost of care can be influenced, to a large extent, by a guideline's short-term clinical measures and target values. To choose clinical measures that will be most useful in guiding treatment, guideline developers need information that will allow them to compare alternatives based on their accuracy, reliability, availability, and correlation with the desired patient outcome. But costs are also important considerations, since some measures — particularly laboratory tests — may be quite expensive.

The target values specified in practice guidelines should also be chosen on the basis of cost and effectiveness. Short-term goals that are more rigorous than necessary to achieve the desired patient outcome may entail undue risk and cost. For example, lowering blood pressure to 150/90 in patients with hypertension may substantially reduce morbidity and mortality from stroke, coronary artery disease, and renal disease. With additional medication, it may be possible to lower blood pressure in these patients to more "normal" values (such as 120/80). Target blood pressures that low may not be appropriate, however, if they produce little improvement in long-term benefits but result in a higher incidence of drug side effects and incur greater costs.

Approaches to Care. To achieve the clinical target and the desired patient outcome, practice guidelines suggest one or more approaches to care. These approaches may specify the use of certain types of practitioners and modalities of evaluation or therapy. A hypertension guideline, for instance, might recommend an initial evaluation by a physician; routine follow-up care by a nonphysician practitioner; and a series of therapeutic options involving diet, exercise, and one or more kinds of drugs.

To play a role in containing costs, practice guidelines need not foreclose particular approaches to care on the basis of cost alone. Guidelines should, however, provide practitioners, patients, and payers with explicit information allowing them to compare different approaches to care. The criteria for evaluation should include effectiveness in achieving the clinical target and desired patient outcome, the adverse outcomes that may be expected from following the proposed courses of action, and expected costs.

In certain cases, the most appropriate approach to care may vary according to characteristics of the patient or the physician's practice environment. Guidelines can therefore be most useful if they are targeted to the populations that practitioners typically see. They should also identify alternative approaches to care to account for frequently encountered differences among patients and in the availability of health care resources in various regions of the country.[1]

Guidelines focusing on the evaluation of symptoms in primary care settings should be based, whenever possible, on evidence drawn from studies of typical primary care patient populations rather than just patients referred to specialists for care. For example, the prevalence of serious coronary artery disease in patients presenting with chest pain differs among patients seen by primary care physicians compared with those who are referred to cardiologists. Therefore, the most effective and efficient approach to care may differ for the two groups, perhaps entailing greater use of invasive diagnostic services for the latter. If generalists used a chest pain guideline based on the patient population that cardiologists see, care could be inappropriately aggressive, entailing undue risk and cost.

To facilitate informed assessments of benefits, risks, and costs, guidelines should attempt to account for frequently encountered differences in patient characteristics and preferences. The benefits and risks of an operation may vary substantially, depending on a patient's underlying disease and other medical problems. Patients may also feel differently about the desired and undesired outcomes of various approaches to care. Certain patients, for instance, may not mind a common side effect of a drug; others may find it intolerable. If guidelines highlight decision points that are particularly sensitive to individual patient factors, they can stimulate valuable — and potentially cost-saving — discussions between practitioners and patients.

Finally, guidelines should attempt to account for common differences in the local availability and quality of health care resources. Suggested approaches to care in practice guidelines presume certain effectiveness rates for diagnostic or therapeutic procedures, certain levels of sensitivity and specificity for laboratory tests, and the availability of particular services. But in some localities, expertise may not meet these standards. In addition, access to technology, specialist care, and ancillary services may vary in different types of practices and regions of the country. For this reason, a guideline's suggested approach to care may not be achievable in some locations and may not be the most cost-effective course to follow in others. Guidelines can address this problem by making their assumptions about quality and availability explicit and by identifying, whenever possible, alternative approaches to care that are applicable to different types of practice environments.

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[1] Guidelines can be adapted locally for improper reasons, such as to perpetuate unsupportable local customs or to further economic self-interest (IOM 1992). This is less likely to occur if nationally developed guidelines recommend the specific adjustments that will most often be needed to address differences in patients and health care resources. Care must be taken to ensure that local adaptations do not vitiate the benefits of a guideline.

The Need for Service Guidelines

Practice guidelines can play an important role in containing costs by identifying services that are of little or no benefit to patients. Diagnostic and management guidelines incorporate such information, either implicitly (by not mentioning a procedure that could be used to evaluate or treat a certain condition) or explicitly (by recommending that a procedure not be used for this purpose). Guidelines focusing on particular services may be better suited for this purpose, however, because they summarize in one place the appropriate and inappropriate indications for each procedure's use.

Service guidelines provide an efficient way for physicians to learn when they are providing services that are not beneficial to patients and when they are not providing services that are beneficial. Coupled with profiling information on practice patterns, such guidelines may be particularly helpful in enabling physicians to respond effectively to Volume Performance Standards (see Chapter 9). Profiles inform physicians about the rates at which they are actually performing or ordering certain services in their practices. Service guidelines can identify ways for them to reduce the volume of these services without compromising the quality of patient care.

Service guidelines may also be helpful to patients and payers. Patients often need to decide whether to undergo a procedure; or they may hear about a procedure and want to know whether it is right for them. Guidelines that identify when procedures should and should not be performed can help patients be more informed consumers, decreasing patient-induced demand for unnecessary services and increasing the likelihood that they will get services they actually require. Since utilization review is currently focused mainly on the provision of services (rather than on the evaluation and treatment of conditions), service guidelines are also particularly suitable for payers. Appropriate and inappropriate indications for services can form the basis for developing criteria for utilization review (Brook 1989; Dubois 1991).

Choosing Guideline Topics

Many factors should be considered in choosing topics for practice guidelines. Cost is one. Guidelines can affect costs by identifying appropriate care — especially care that could lower future expenditures — that is not being provided enough. Cost control can also be enhanced by developing diagnostic and management guidelines that focus on common conditions now being treated inappropriately or in an unduly expensive fashion. Such conditions include those for which practitioners and patients find the benefits, risks, and costs of alternative approaches to care difficult to weigh. Service guidelines can be most useful if they are targeted at commonly provided diagnostic and therapeutic procedures that are likely to be used inappropriately or that entail substantial risk or cost.

Identifying Necessary Resources and Personnel

Practice guidelines can promote more appropriate care not only by identifying what comprises that care, but also by identifying the resources and personnel required to provide it. This type of information can be used to make informed coverage decisions and to ensure adequate training of health care practitioners.

Making Coverage and Contracting Decisions. Currently, payers and policymakers have inadequate information for deciding which services should be covered or which providers should be paid for performing them. Consequently, services that are important components of appropriate care may not be covered while resources may be wasted paying for unnecessary or inadequate care. As appropriate care becomes better characterized by practice guidelines, these decisions can be made on a more rational basis.

Guidelines that specify what is needed to achieve their suggested approaches to care — in terms of services, personnel, expertise, and equipment — are likely to be most helpful in this regard. This information can be used to make coverage decisions about physician services, ancillary nonphysician services (such as patient education), medications, and supplies. It can also form the basis for selective contracting. Guidelines assume that laboratory tests are performed with a certain degree of sensitivity and specificity and that the rates of adverse outcomes for invasive procedures do not exceed a specified value. If guidelines are explicit about these assumptions, payers could require that laboratories and hospitals meet these standards to be eligible for payment under their plans.

Training Health Care Professionals. An important goal of medical education is to provide students, residents, fellows, and practicing clinicians with the knowledge and skills they need to provide appropriate care for their patients. Guidelines can be a particularly valuable tool to help medical educators achieve this goal. At their best, guidelines comprise more than statements about effective and efficient approaches to screening, diagnosis, and management. They also document the evidence and reasoning that undergird these approaches. This type of explication can form a sound basis for medical education at all levels.

Practice guidelines can also help educators identify the knowledge and skills their students need to care for patients with particular conditions. The suggested approaches to care in guidelines are based on assumptions about practitioner performance. Guidelines covering screening for cervical cancer, for example, presume that adequate cervical smears are obtained and read with a certain degree of accuracy. Guidelines for the management of patients with chest pain make assumptions about the rates of adverse outcomes for cardiac catheterization, angioplasty, and bypass surgery. Guidelines for the management of chronic diseases, such as diabetes, assume that physicians caring for these patients have been trained to manage complex multi-modal treatment regimens involving many providers and active patient participation. Guidelines can help ensure that practitioners are well trained to provide appropriate care by being as explicit as possible about the knowledge, skills, and levels of expertise that underlie their assumptions.

Monitoring Practitioner Performance

Practice guidelines can do more than simply provide health care professionals with information to improve the quality and efficiency of their care. They can also form a rational basis for monitoring and assessing provider performance (Brook 1989; IOM 1992; Eddy 1990a). Monitoring guideline use can foster appropriate care by motivating clinicians to follow guidelines in their practices. This incentive can be strengthened by furnishing practitioners with feedback about their performance (see Chapter 9). It can also be reinforced by identifying practitioners who comply with guidelines and rewarding them by, for example, exempting them from payment denials or case-by-case utilization review, as proposed in recent federal legislation (S. 1227).

Monitoring compliance with practice guidelines can serve other important functions as well. For instance, it can be used to assess the competence of individual practitioners in evaluating and managing specific conditions (Gellhorn 1991). This can be helpful to medical educators as well as to licensing bodies, certification boards, and hospitals (IOM 1992; Eddy 1990a; Brook 1989). It can also be used to assess the quality of care for particular conditions within a community. Such applications would involve pooling information from all practitioners rather than focusing on the performance of any one individual.

Monitoring the use of guidelines in practice can also generate appropriate utilization rates to use as norms in profiling (see Chapter 9). The approaches to care in practice guidelines have a number of branch points that depend on a variety of patient factors. Thus, many of the services described in practice guidelines are an appropriate part of care for some patients but not for others. By monitoring how often practitioners who follow a guideline deliver certain services, appropriate utilization rates can be determined for patient populations with a particular condition. Such information can make utilization review profiling far more effective, exempting most practitioners from the intrusiveness of case-by-case review.

Guidelines are now being used in some of the above-mentioned ways. However, they should probably not be used to monitor or assess care unless certain requirements can be met. There is a need to identify and then obtain information about relevant indicators of the process and outcomes of care for each guideline. More important, before any guideline is used as a standard of care for purposes of credentialing, certification, or granting of privileges, it should be documented to be valid and reliable. Guidelines that do not meet these criteria may still be quite useful for nonregulatory purposes, such as informing clinical decisionmaking or providing practitioners with feedback about their performance (see Chapter 9).

Indicators of the Process and Outcomes of Care. Monitoring compliance with a practice guideline depends on having data about relevant aspects of the guideline's recommended processes of care. To assess a guideline's effectiveness, data about outcomes that are closely correlated with the guideline's process of care are also required.

Guidelines can be most useful in facilitating these efforts if they explicitly identify process and outcome measures that should be used for these purposes. Process indicators should be services that are an integral part of a guideline's approach to care, preferably those that are necessary to achieve the clinical target and the desired long-term patient outcome. For example, a diabetes guideline might suggest monitoring the rate at which practitioners order glycosylated hemoglobin tests (a measure of overall blood sugar control that is useful in making decisions about therapy). It would be considerably less meaningful, in this case, to monitor the rate at which practitioners order random blood sugars since these results are generally not helpful in making management decisions.

The ultimate indicator of the effectiveness of a practice guideline is the desired patient outcome (such as the prevention of stroke, coronary artery disease, and renal disease in patients with hypertension). However, this outcome — which often cannot be determined until years after therapy has begun — is frequently influenced, to a greater or lesser extent, by factors beyond the practitioner's control. The clinical measure in a guideline, such as glycosylated hemoglobin levels in a diabetes guideline, is a short-term outcome measure. To the extent that the clinical measure correlates both with the guideline's process of care and with achieving the ultimate desired patient outcome, it is a valid indicator of effectiveness.

Whenever possible, process and outcome indicators should be ones that are accurately and reliably recorded in available databases. This may be difficult to achieve, however. Clinical target values and meaningful indicators of the process of care are often not included in conventional claims data. Much of this information is recorded in the medical record. However, this data source is expensive to use (information must be abstracted) and may not be reliable (services that are provided in physicians' offices are not necessarily recorded).

Studies have suggested that accurate, reliable, and relevant information about the process of care can be obtained from condition-specific encounter forms (see Chapter 9). Such forms could be developed to monitor compliance with specific diagnostic or management guidelines. In the future, it may be possible to design a process of care that generates the information required to track compliance. If guidelines were presented in a real-time computer format, for instance, practitioners could supply the relevant information in the course of using the guideline. The computer record could then serve as the basis for reviewing the practitioner's performance.

Validity and Reliability of Guidelines. A guideline can be considered valid only if the desired patient outcome is realized when the guideline is used in actual practice. This is more likely to occur if the recommendations in the guideline are based on sound scientific evidence — preferably from research on the effectiveness of diagnostic or treatment approaches for the types of patients practitioners see in their practices.

At this relatively early stage in the development of guidelines, little is known about their validity. Guidelines are typically composed of evaluation or management paths whose building blocks are individual steps or choices. Scientific evidence pertaining to some of the steps in a guideline is usually available. However, because the quality and applicability of the studies involved may vary — and in certain cases may even be contradictory — processes are required to evaluate and synthesize the evidence (Eddy and Billings 1988). Little information may be available about other steps in a guideline or about how the various steps should be combined. Therefore, all guidelines ultimately require a process involving expert judgment to synthesize a coherent approach from fragmentary knowledge.

Currently, information is scarce about the quality and reliability of processes being used to develop guidelines (IOM 1992). Evaluation may be difficult because the success of a particular process may depend on the type of guideline being developed, the amount and type of scientific evidence available, and the use to which the guideline will be put. Ultimately, given the limitations of data and methods, the most efficient and meaningful way to test the validity of guidelines may be by studying the effectiveness with which they improve patient outcomes and control costs in actual practice (IOM 1992).

For many conditions, it may be possible (by combining data from a variety of sources) to follow short-term and long-term outcomes and incurred costs for patient populations managed according to promising guidelines. Monitoring compliance is a prerequisite for these types of studies, since improvements in outcome or savings in costs can be attributed to guidelines only to the extent that they can be documented to have been followed. Similar studies can also be used to compare the effectiveness of "competing" guidelines, particularly if they control for compliance and relevant patient factors.

THE PROGRESS OF EFFORTS TO DEVELOP VALID, USEFUL GUIDELINES

This section describes the progress that has been made toward developing guidelines that will help improve the value of health care that is delivered. Using the framework delineated earlier, it examines existing guidelines and identifies gaps in the research base that need to be filled by outcomes and effectiveness research. It then analyzes the methods being used to develop and evaluate guidelines.

Existing Guidelines

The American Medical Association (AMA) has identified more than 1,000 existing guidelines covering an array of topics (AMA 1991a). Not all of them should be used. Some were developed by professional or industry groups to justify payment for questionably appropriate services (GAO 1991). Others simply codify existing practices or the unverified opinions of one or two authors (Eddy 1990c).

Some available guidelines may be of limited use. Some contain vague statements that could be sharpened with less effort than it would take to construct a new guideline from scratch. Many guidelines lack elements, such as indicators of processes or outcomes, that could facilitate particular uses. Although such indicators are best derived when a guideline is created, they could be supplied afterwards. Some older guidelines may simply need to be updated. Some guidelines recommend care that is more intensive than necessary.

Finally, certain existing guidelines are likely to be quite useful in meeting the needs of the health care system. However, some of these were developed for local use only, and other promising guidelines may not have been widely disseminated and used. There are also well-constructed guidelines that simply are not on the topics or of the types (service versus diagnostic and management) that are probably most needed to improve care.

The Development of New Guidelines

More than 50 organizations are developing practice guidelines, including professional groups, payers, hospitals, academic medical centers, health maintenance organizations, government agencies, public and private researchers, and malpractice insurers (IOM 1992; AMA 1991a; Woolf 1990; Eddy 1990b). AHCPR is funding the development of 16 guidelines at present, and ultimately it may develop as many as 10 new guidelines per year and update its older guidelines as needed (Table 8-1).

Types of Guidelines Being Produced. Diagnosis, management, and service guidelines are all being produced at present, but different guideline developers are focusing on particular types. Utilization review is most often conducted on services rather than conditions, so most payers are basing review criteria on either implicit or explicit service guidelines. One utilization review company, for example, produces detailed service guidelines and transforms them into utilization review software. When its system was applied to preauthorization requests for major procedures, practitioners and patients were informed between 10 and 15 percent of the time that the proposed procedure was medically unnecessary (Dubois 1991).

With one exception,[2] AHCPR is sponsoring the development of diagnosis and management guidelines only, although its legislative mandate authorizes the production of service guidelines as well.[3] The relative proportions of service guidelines and diagnosis and management guidelines being produced by others is unknown. Professional societies appear to be developing all three types.

Selection of Topics for Guideline Development. The efforts of guideline developers are not being guided by a consistent set of priorities.

Private Sector. Factors that have influenced the selection of topics include the intended use of the guideline, sufficiency of the scientific evidence on the topic, the amount of variation in practice and outcomes, the morbidity and mortality associated with the condition or service, the volume and cost of services involved, and the resources and expertise available to the developers. For example, the American College of Physicians (ACP) selects topics for its Clinical Efficacy Assessment Project based on the degree of interest to internists, potential for significant health benefit or risk, level of unit or aggregate costs, potential to improve knowledge and affect practice, adequacy of evidence, and lack of similar guidelines on the topic (ACP 1990, 1986; White 1985). How priorities among these factors are set is not identified. Other developers use different factors or weight them differently.

AHCPR. AHCPR is required by law to set its priorities for guideline development according to the extent to which the guidelines can be expected:

> to improve methods of prevention, diagnosis, treatment, and clinical management for the benefit of a significant number of individuals; to reduce clinically significant variations among physicians in the particular services and procedures utilized in making diagnoses and providing treatments; and to reduce clinically significant variations in the outcomes of health care services and procedures (OBRA89 Section 914).

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[2] The guideline on quality determinants of mammography might be called a performance guideline rather than a diagnostic, management, or service guideline, since it presumably will address how a service should be performed rather than when and why it should be done.

[3] OBRA89 requires AHCPR to develop "treatment-specific [service] or condition-specific [diagnostic and management] practice guidelines for clinical treatments and conditions" (OBRA89 Section 912.B.3.).

Table 8-1. Practice Guidelines Sponsored by the Agency for Health Care Policy and Research

Guidelines Being Developed	Date Work Initiated	Expected Release Date
BY THE OFFICE OF THE FORUM FOR QUALITY AND EFFECTIVENESS IN HEALTH CARE:		
Acute Pain Management	Jul 90	Mar 92
Diagnosis and Treatment of Depressed Outpatients in Primary Care Settings	Sep 90	Jul 92
Diagnosis and Treatment of Benign Prostatic Hyperplasia	Jul 90	Jul 92
Management of Functional Impairment Due to Cataract in the Adult	Aug 90	Jul 92
Sickle Cell Disease	Nov 90	Jul 92
Prediction, Prevention and Early Intervention of Pressure Ulcers	Aug 90	Apr 92
Urinary Incontinence in Adults	Aug 90	Mar 92
HIV Positive Asymptomatic Patient: Evaluation and Early Intervention	Jul 91	Oct 92
Quality Determinants of Mammography	Mar 92	1993
Management of Cancer-Related Pain	Sep 91	Dec 92
Treatment of Stage 2 and Greater Pressure Ulcers	Jun 91	Feb 93
Low Back Problems	Nov 91	Feb 93
Screening for Alzheimer's and Related Dementias	Mar 92	1993
BY CONTRACTORS:		
Otitis Media in Children	Nov 91	Dec 92
Post Stroke Rehabilitation	Jan 92	Dec 92
Diagnosis and Treatment of Heart Failure Secondary to Coronary Vascular Disease	Jan 92	Dec 92

Source: Agency for Health Care Policy and Research.

AHCPR has interpreted this mandate as permitting consideration of the following factors:

- the adequacy of science-based evidence;
- the number of individuals affected by the clinical condition;
- the amenability of the condition to prevention;
- the expected potential for reducing inappropriate variations in the prevention, diagnosis, management, or outcome of a particular disease or condition;
- specific needs of the Medicare and Medicaid populations; and
- the cost of the condition to all payers including patients (HHS 1990).

AHCPR has chosen to develop guidelines on the diagnosis and management of a variety of conditions such as acute pain, benign prostatic hyperplasia, and urinary incontinence in adults (Table 8-1). From an inspection of this list, it is not clear what priorities AHCPR has established among the various factors it considers.

Coordination of Topics. It is important that guideline development be coordinated so that efforts are not duplicated. Unfortunately, there is no clearinghouse developers can consult that collects the full range of practice guidelines that are being produced. The AMA/Specialty Society Practice Parameters Partnership and Forum provides an opportunity for its members to share information on the development, evaluation, and use of practice guidelines.[4] However, many guideline developers do not participate in the partnership, and only formally identified practice guidelines developed for national use are listed in the AMA's *Directory of Practice Parameters* (AMA 1991a). Many potentially useful types of guidelines — such as those produced and used by the Harvard Community Health Plan, published in the *Medical Letter,* or developed by private payers — are not included. Selected guidelines are summarized and critiqued in *Abstracts of Clinical Care Guidelines,* but only formal guidelines developed for national use appear to have been reviewed in 1991.

Two guidelines might be produced on the same topic because of a lack of coordination or because they reflect legitimate differences in local resources or patient populations that result in different approaches to care. In either case, it is desirable for differences between guidelines to be explored to clarify the assumptions, evidence, and judgment that underlie them (IOM 1992).[5] Differences that cannot be reconciled indicate that additional evidence is needed, which could be obtained by comparing the effects of implementing the guidelines in practice.

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[4] The AMA/Specialty Society Practice Parameters Partnership is composed of the AMA, AHCPR, the Joint Commission on Accreditation of Healthcare Organizations, and 14 specialty societies. The AMA/Specialty Society Practice Parameters Forum is composed of more than 80 physician organizations.

The Content of Guidelines Being Produced. This section discusses the extent to which current guidelines contain the elements identified earlier that can help guidelines be used to address the cost as well as the quality of care.

Desired Patient Outcomes, Clinical Measures, and Target Values. Guideline developers are limited by the lack of outcomes and effectiveness research necessary to delineate the expected outcomes as well as desirable clinical measures and target values. Without these elements, users cannot judge the appropriateness of a guideline's goals or clinical measures. Even when evidence from research is lacking, guidelines' assumptions concerning these elements should be explicitly stated. This would enable evaluation of whether the expected improvement in patient outcomes or reduction in costs is achieved in practice.[6]

Identification of Inappropriate Care. One way for guidelines to help decrease the delivery of unnecessary services is to make explicit when treatment is ineffective or inappropriate. Service guidelines should do this as a matter of course — although many do not — but this information is not often included in diagnosis and management guidelines. An exception is the American Heart Association's guideline on prevention of bacterial endocarditis, which lists specific indications for which prophylactic antibiotics are not recommended (Dajani et al. 1990).

When inappropriate approaches to care are mentioned in existing guidelines, the statements can be vague (IOM 1992; Audet et al. 1990). For example, some guidelines state that a given diagnostic test is not indicated when it will not alter management decisions. Although this statement is true (as is the case for all tests), it is not helpful. Guideline would be more useful if it identified specific conditions for which the test is frequently but inappropriately ordered in practice. Even when indications for a service are listed, they are often described in qualitative terms. "Severe" and "frequent" are terms that are often used but not specific enough to be interpreted uniformly. An example of a guideline recommendation that employs more specific terms is: "Bradycardia, in which the longest R-R interval is less than three seconds and the minimum heart rate above 40 beats per minute, with no symptoms or no correlation of symptoms with arrhythmia, is a diagnosis that does not indicate the implantation of a permanent pacemaker." (Audet et al. 1990).

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[5] The Council of Medical Specialty Societies has sponsored a workshop for specialty societies on how to resolve conflicts among them about guideline recommendations (Gschwend 1990).

[6] Often the ultimate outcomes affected by a guideline will not occur for many years. In this situation, sensitivity analyses could identify the clinical targets that potentially have the largest effect on the ultimate outcome. Monitoring the rates of achievement of those clinical targets can provide an early assessment as to whether the benefits of the guideline will be realized (Nease and Owens 1992).

Adjustments for Differences Among Patients and in Available Resources. Because the risks and benefits of different approaches may not be the same for various types of patients, a cost-effective approach for one subgroup may be inappropriate for another. To adjust recommendations for differences in patient populations, guideline developers need information on the prevalence of disease in various subgroups of patients, and on the performance (sensitivity and specificity) of diagnostic or therapeutic tests or procedures with these subgroups. This information is usually not available.[7]

Description of Costs of Treatment. Guidelines can also promote cost-effective care by identifying the costs of the effective alternative approaches to treatment, so that users can consider them in choosing among the acceptable options (IOM 1992; Eddy 1990d, 1990e). For example, the *Medical Letter* (which publishes what are, in effect, service guidelines for drug therapy) lists the relative costs of a month's supply of the alternative drugs available to treat the condition in question.

The costs of treatment approaches are often not stated in existing guidelines. Information on costs of medical care is infrequently provided in the medical literature. Costs may be portrayed in different ways: for example, as submitted or imputed charges, payments, or estimates of actual costs. Some of this information may be more easily obtained, and expressing costs in certain ways may be more relevant for some guideline users than for others. Whereas it may be relatively simple to secure data on charges, for instance, this information may be less important than actual costs for some users.

Cost-effectiveness and cost-benefit analyses can provide more information to guideline users, but they are even less straightforward to produce than statements of the costs of treatment approaches (IOM 1992). The net cost of a treatment approach depends on estimates of its effectiveness and complications. The often-complex effects on other aspects of care need to be considered as well. Cost-effectiveness and cost-benefit analyses are increasingly being published, but most of these studies are not being done rigorously (Udvarhelyi et al. 1992).

Putting Guidelines Into Practice

No matter how well guidelines are developed and constructed, they are unlikely to improve the appropriateness or cost-effectiveness of care unless they reach users who are motivated to put them into practice. Guidelines are more likely to be employed if they are prepared in formats and contexts that facilitate their use, disseminated effectively, and coupled with appropriate incentives.

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[7] For example, one service guideline was unable to reach firm conclusions about alternative approaches to care because of these problems (Kotler and Diamond 1990).

Format. Guidelines are more likely to be used if they are clear, specific, and presented in a usable format. The best way to format guidelines for different uses is not known. Guidelines can be presented in narrative form, but they may often be easier to use in the form of algorithms or flow charts (Gottlieb et al. 1990; Margolis 1983). A number of existing guidelines have been organized as algorithms.

Customized medical encounter forms could simultaneously communicate a guideline and document information to measure compliance with it. Computers might be able to perform this task, leading clinicians or patients interactively through a guideline while simultaneously documenting compliance with it. For example, software programs have been developed at Yale-New Haven Hospital that give clinical advice based on guidelines (Clyman et al. 1991). The programs solicit from the clinician information about the patient, and suggest diagnostic and treatment measures along with the rationale for them.

Computers can also provide more individualized assessments of the risks and benefits involved in treatment options in a guideline. An interactive video disk has been shown to be useful in informing and discerning patients' preferences concerning the management of benign prostatic hypertrophy (Barry et al. 1988). Similar programs are being developed for other diseases such as breast cancer, low back pain, and chronic cardiac disease (IOM 1992).

Dissemination. Guidelines can be disseminated through medical journals and texts, on-line computer networks, medical records forms, computer software, laser disks, and paper. The National Library of Medicine (NLM) is preparing to put the full text of guidelines on-line. The Joint Commission on Accreditation of Healthcare Organizations publishes summaries of guidelines in *Abstracts of Clinical Care Guidelines.* The AMA publishes a directory of practice guidelines annually, with quarterly updates. At least one newsletter, *Medical Guidelines and Outcomes Research,* notes the release of new guidelines. AHCPR intends to disseminate the guidelines it sponsors by a variety of methods. It is planning to study the relative success of different methods of dissemination in reaching the intended users of guidelines (HHS 1991).

Incentives to Use Guidelines. For guidelines to affect practice, providers must have incentives to use them. Monitoring and feedback of information about compliance with guidelines can help secure behavior change for the average physician, not just the outliers (Eagle et al. 1990; see Chapter 9). Another positive incentive would be for providers who demonstrate compliance with guidelines to be exempted from utilization review or other requirements. The malpractice system can provide an incentive to the extent that it recognizes guidelines as establishing the standard of care.[8] Payment policies can help support the use of guidelines; for example, the most cost-effective approaches could be fully covered, and inappropriate care could be excluded from coverage.

The Clinical Research Needed to Inform Guideline Development

The information needed on which to base guidelines places special demands on research. Clinical trials of the efficacy of treatment are suited to producing the kinds of information needed to set guidelines' goals and clinical targets. But clinical trials usually do not provide the data needed to generalize these goals and targets to the patient populations seen in actual practice. Information is needed to adjust these goals and targets for different populations and available resources, assess the costs and benefits of treatment approaches in community practice, and monitor the use and effectiveness of guidelines in practice settings. The new emphasis on outcomes and effectiveness research is intended to respond to these needs. AHCPR and others are providing increased funding for outcomes and effectiveness research, but it will be some time before information from those studies is available.

Effectiveness research needs to be performed on the patient populations that typically would receive the care studied. Past studies have characteristically been performed on special populations, such as those referred to specialty clinics. In addition, patients are often excluded from clinical studies if they have multiple illnesses, take related medications, or display other characteristics (such as poor compliance with treatment) that may reduce the treatment effect or otherwise compromise the ability of the investigators to interpret the results of the study. This may be particularly true of the elderly. Women and minorities have often been excluded from research studies as well. As a result, research studies have usually been performed on a small subset of those who would actually receive the care in the community. The Department of Health and Human Services has begun to encourage and require that medical research include women, minorities, the elderly, and other subgroups whenever possible. To date, however, important information on these groups is still lacking.

AHCPR funds effectiveness research via its Medical Treatment Effectiveness Program (MEDTEP). At least 35 relatively small studies have been supported to date. Twelve large multiyear projects, called Patient Outcome Research Teams (PORTs), have been funded on conditions such as acute myocardial infarction, hip fracture, and biliary tract disease. These projects utilize multiple sources of data, including data from community practice, to document and analyze variations in practice and outcomes. The first PORTs are in the middle of their work plan at present, so it is not known whether they will produce the types of information that are needed by guideline developers.

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[8] Issues regarding the use of practice guidelines in the malpractice system are discussed in Chapter 7 and in the Institute of Medicine report (IOM 1992), and an AMA analysis (Johnson et al. 1990).

It is difficult to assess how much research is being supported by other government and private bodies that will produce information relevant to guideline development. Clinical trials, such as those funded by the National Institutes of Health (NIH), can be designed to provide important information. For example, investigators are attempting to use data from the Diabetes Control and Complications Trial to identify the least rigorous degree of control of blood glucose that effectively decreases the rate of development of complications from diabetes and which interventions are most effective in preventing these complications.

In general, people who review studies for funding, set priorities for research, or carry out studies are not themselves guideline developers. Therefore, close coordination is necessary to ensure that the right types of information from medical research are available on those topics of highest priority for guideline development.

Methods of Producing Guidelines

In the past, recommendations for clinical care found in textbooks were usually generated by methods that do not meet the needs of today's guidelines movement (Eddy 1990c). Typically a single scholar in the field would use his or her own expertise and judgment, along with an informal survey of the literature, to formulate recommendations. Existing practices often were simply codified. Moreover, the intensive approaches to diagnosis and management typically used in tertiary care centers were usually recommended. The resulting guidelines tended to ignore costs and to recommend overuse of services.

Great attention is now being paid to making guideline development processes more rigorous and credible. There are two parts to the process of developing guidelines: the collection and evaluation of the evidence to be considered, and the process by which experts consider the evidence and formulate coherent approaches to care (Chassin 1988). This section describes methods being used for each of these parts of the guideline development process and what is being done to evaluate them.

Scientific Evidence. Retrieving, selecting, and summarizing the evidence to be considered by the developers can be the most costly and time-consuming part of guideline development. It is an essential part, however, for at least two reasons. First, evidence is needed so that current practices can be examined critically and not simply codified (Eddy 1990c). Second, guidelines based on evidence of the effectiveness of care are more likely to be valid; i.e., to produce their desired outcomes.

The strategy used to obtain and evaluate scientific evidence should be fully disclosed by guideline developers, to permit others to assess the methods. For example, one ACP Clinical Efficacy Assessment Project guideline describes its literature search in detail, including the keywords, journals, and dates searched (Kotler and Diamond 1990). The guideline identifies the types of articles considered and how their relevance was determined, and sources of bias in the studies are explicitly discussed (including that the studies on effectiveness of the test were done on patients different from those for whom the guideline would typically be used).

Retrieval of Studies. A major task is to assemble the relevant evidence. The volume of literature to be searched and the number of citations retrieved can be enormous, depending on the scope of the guideline. For AHCPR's Human Immunodeficiency Virus guideline panel, the National Library of Medicine searched as many as 30 databases and retrieved 36,000 citations. Even the smallest bibliography the NLM has prepared to date (for the acute pain management guideline) included 5,500 articles. Literature searches for more circumscribed conditions or services may be more manageable.

Clearly, efficient search strategies need to be elucidated. The NLM is analyzing the results of the literature searches it performed for the first AHCPR-sponsored guidelines to develop better strategies. The library is also modifying the way it indexes articles so that literature searches relevant to guideline development are more precise and efficient. It is also offering training manuals and instruction in how to search the literature.

Selection of Evidence to be Considered. Once studies have been assembled, those that are relevant to the topic and of good quality must be selected for consideration by the panel of experts.[9] Some manner of weighting studies by their quality is often used (HHS 1990; ACP1990). Since studies with stronger designs and good methodology are less likely to be biased, weaker studies are often excluded from consideration.[10] This can eliminate useful information, however, and thus must be done carefully. Such decisions should be made on objective grounds, and the raters should be blind to the results of the study.

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[9] Evidence that is available to guideline developers can be incorrect. Research studies customarily contain an estimate of the likelihood that their conclusions are incorrect due to chance, but available studies are also subject to several potential forms of bias (nonrandom error) that cannot easily be accounted for. Studies that do not demonstrate a treatment effect above a 95 percent level of confidence are less likely to appear in the literature. This may bias estimates of effectiveness upward and can hinder guideline developers from identifying treatment approaches that are ineffective.

The data that are used in studies may themselves be subject to bias. For example, the recording of data — particularly in the practice settings in which effectiveness research needs to be performed — can be systematically influenced by payment incentives, coding systems, or other factors.

[10] The methodology of a study may incorporate hidden biases; conversely, strong study designs minimize the risk of bias. For example, blinding investigators to patient treatment status can prevent the investigators' prejudices from influencing the results of a study. For each study type (e.g., randomized controlled trial, case-control, cross-sectional), a number of such elements can improve the rigor of the study. Assessments of the strength of the methodology of published studies have concluded that weak methodology predominates (Eddy and Billings 1988).

The AHCPR-sponsored guideline panel on urinary incontinence, which began with a bibliography of 7,000 articles, illustrates the process. The panel assessed the studies qualitatively on a number of parameters, including possible sources of bias, sample size, analytic methods, and applicability to broader populations. An evidence table was then created, ranking each study as good, fair, or poor (Woolf 1991). Slightly more than 1,000 studies were deemed to provide potentially useful information; of these, the panel relied most heavily on 161 — only 2 percent of the original list.

Summarizing the Scientific Evidence. The information from multiple studies must be summarized in some fashion. This can be done in ways ranging from purely qualitative to highly quantitative. Qualitative reviews are easier and faster to do, but they may be biased by the reviewer. Meta-analysis is a method of quantitatively combining information from multiple studies. This can yield additional information, but it carries its own risks of bias and should be done rigorously. Few guideline developers use formal meta-analysis at present, because it requires considerable expertise and resources, as well as the availability of studies to analyze (IOM 1992). It would seem to be an important technique when applicable, but, again, it is not known whether it improves the validity of a guideline or whether it is an efficient technique to use.

Formulation of Guidelines by Panels of Experts. Panels of experts are typically assembled to consider and supplement evidence and to formulate guidelines. The quality and cost of this process depends on the composition of the panels and how their deliberations are structured. What works best is not known but is quite amenable to research.

The Harvard Community Health Plan, for example, developed a method to compare the clinical similarity of algorithmic guidelines and used this method to perform a study of the reliability of a guideline consensus process (Pearson et al. 1992). Three different physician groups were given the same literature synthesis and generic algorithm from which to generate algorithmic guidelines for the diagnosis and management of two common primary care conditions. Using the same group process and Delphi method, each group independently produced guidelines. The guidelines were judged to be similar relative to major therapies and indications for diagnostic tests, leading the investigators to conclude that this consensus process was reliable across different physician groups.

Composition of Panels. The panel members must have sufficient expertise and should represent a balance of perspectives. Many development efforts use multidisciplinary panels to achieve diverse perspectives. But even this can be unsuccessful if the members of a multidisciplinary panel all share the same bias or school of thought. The types of professionals to include on guideline panels are unknown. Nevertheless, it seems advisable, if feasible, to include physician and nonphysician practitioners from each of the specialties that can or do participate in the care the guideline is to cover. Representatives of patients, payers, malpractice insurers, hospitals, and other groups may contribute valuable perspectives. It may be desirable to have panel members from different geographic locations, urban and rural practices, academic and community settings, and salary and fee-for-service compensation systems; health services researchers and other methodology experts can also be helpful.

The number of persons on guideline panels varies widely and can be as many as 20 (GAO 1991). There is a trade-off between having a panel small enough to be workable and one that includes everyone who is needed.

How Panels Deliberate. The structure of the group processes used for guideline development varies considerably in the nature and degree of interaction among the panel members. The AMA's Diagnostic and Therapeutic Technology Assessment (DATTA) process simply polls the panel members and reports the results (AMA 1991b). RAND uses an elaborate modified Delphi process in which the panel is polled separately on each possible clinical indication for the use of a specific procedure or technology. The results are fed back to each panel member, and a second set of polls is taken after group discussion (Chassin et al. 1986; Brook 1989). AHCPR-sponsored panels meet several times to develop the guideline in stages, but the process is much less structured than RAND's. For the NIH Consensus Development Program, the panel holds public hearings and then deliberates in private overnight until it produces a guideline; the dynamics of the group process are not disclosed.

Agreement in Group Processes. The nature of agreement in group processes is important. A useful element of practice guidelines is the identification of clearly inappropriate or appropriate approaches to care. Substantial agreement among the panel can help identify such black-and-white areas.[11]

Techniques for promoting agreement — and how much agreement to, in fact, promote — are not clear. Because the degree of agreement can be used as a measure of the strength of the rating of an indication for treatment, forcing an artificial consensus is not advisable. On the other hand, differences of opinion can often be resolved on legitimate grounds through the interaction of panelists. Agreement can also be defined in different ways, which may result in different conclusions for the guideline.[12] Agreement may need to be defined strictly to permit more regulatory uses of a guideline.

Efficiency of Guideline Development Methods. Different methods of guideline development require widely disparate amounts of resources and time. As much as $800,000 and two years have been spent to develop one guideline. This level of effort may be justified by the benefits resulting from a guideline.[13] But if it is more than necessary to achieve the same results, it may delay or sacrifice other guideline development activities.

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[11] What remains is a gray zone in which the indications for care are uncertain. Future research should be directed to clarifying the unresolved issues that are the source of the uncertainty.

[12] RAND defines agreement among its nine panelists based on their ratings of the appropriateness of an indication for a procedure on a 9-point scale. Agreement is defined as no more than two ratings outside the 3-point region (1-3, 4-6, or 7-9) that contains the median rating.

The DATTA project polls some 30 to 100 physicians on the safety and efficacy of a service. The report combines the survey results with scientific evidence and is published in the *Journal of the American Medical Association* (AMA 1991b). The process, which takes about six months, costs roughly $15,000 per guideline.

The ACP's Clinical Efficacy Assessment Project uses experts in research methodology and other experts as required to perform a formal literature search and synthesis and prepare recommendations. Physicians from multiple specialties review the recommendations. The process takes from 12 to 15 months and costs about $30,000 per guideline.

The Harvard Community Health Plan uses a panel of eight to 12 experts to develop clinical algorithms. The panel leader reviews and summarizes the literature and develops a "seed algorithm." The group refines the algorithm using a modified Delphi process, and the algorithm is reviewed by non-panel members (Gottlieb et al. 1990; Audet et al. 1990). The cost of developing an algorithm is not known but is probably less than that of the Clinical Efficacy Assessment Project.

The RAND method, which involves a formal literature review and synthesis followed by a modified Delphi process with a multispecialty panel, takes about six months to complete a service guideline at a cost of roughly $200,000.

AHCPR drew on the work of experts to develop a rigorous method for producing the guidelines it sponsors (Eddy 1990a-e; Woolf 1991). A multidisciplinary panel meets several times to formulate a guideline, using an in-depth synthesis of the literature. The process also includes peer review and pilot testing of the draft guideline. The literature searches, reviews, and analyses performed for the Agency's guidelines have taken up to 9 months and cost up to $235,000 (IOM 1992). The entire process, which takes longer than a year, costs about $560,000 on average (IOM 1992; Table 8-1). The Agency is also awarding contracts valued from $340,000 to $675,000 to outside groups to develop guidelines (IOM 1992).

Evaluation of Guidelines

Whether guidelines achieve their expected results in terms of improved patient outcomes or reduced costs must ultimately be tested in practice. AHCPR and others are beginning to undertake this task. The Harvard Community Health Plan is in the process of assessing the effects of use of its clinical algorithms. The Minnesota Clinical Comparison and Assessment Project is developing guidelines along with indicators to assess the use of the guidelines in practice. The profiles of practice patterns it obtains will be shared with participating physicians (Borbas et al. 1990).

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[13] Estimates of the cost of guideline production are not precise because some contributors may not be compensated for their work and staffing costs may not be fully considered.

Some guidelines have already been shown to improve patient outcomes or to reduce costs without adversely affecting patients. Practice guidelines for intra-operative monitoring of blood oxygen content, for instance, reduced the incidence of injuries due to hypoxia during general anesthesia (Keenan and Boyan 1991). After practice guidelines were developed in one hospital for the indications for electrocardiograms (EKGs) in 14 common conditions, EKG use declined by one-third without adversely affecting the quality of care (Wachtel and O'Sullivan 1990).

Until the predictive validity of guidelines can be determined, proxies need to be developed for assessing whether a guideline is likely to be valid. The AMA has developed a brief descriptive form for developers to rate the attributes of their guidelines and the processes used to develop and disseminate these guidelines (AMA 1990, 1991c). The Internal Medicine Center to Advance Research and Education (IMCARE) developed an instrument for practicing physicians to rate the usefulness of a guideline (IMCARE 1991).

The Institute of Medicine has created a provisional version of a comprehensive assessment instrument that can be used to determine whether many of the process and content considerations discussed in this chapter were taken into account (IOM 1992). For example, the assessment instrument asks whether a guideline identifies the benefits, risks, and costs of treatment approaches. It also queries whether a guideline identifies the patient populations to which it applies. The instrument contains questions about the way evidence was collected and summarized and about the group process used.

Because those who use guidelines and are affected by them must be able to evaluate their quality, guidelines — and review criteria derived from them — should be disclosed fully, including the methods by which they were produced and the evidence and reasoning on which they are based. Without this background, there is no way for providers and other users to determine whether guidelines or review criteria are arbitrary. Such documentation could help utilization reviewers respond to charges that they are hindering the delivery of beneficial care and inappropriately hassling physicians. In addition, having access to the basis for guidelines and review criteria can help providers fulfill their professional obligation to ensure that appropriate care is delivered to their patients. Guidelines and review criteria that issue from impenetrable "black boxes" should not be used, and attempts to impose them on providers and patients should be condemned.

HOW EFFORTS TO DEVELOP AND USE GUIDELINES SHOULD BE IMPROVED

The analysis in this chapter reveals both strengths and weaknesses of public and private sector initiatives to develop and use practice guidelines. The amount of effort and resources being devoted to developing guidelines is encouraging, as is the attention devoted to using more rigorous processes despite the lack of knowledge about how to produce valid guidelines efficiently. Useful guidelines are, indeed, being produced, albeit at a slow rate.

In three areas, however, practice guideline efforts need to be strengthened and better directed. First, practice guidelines are not being constructed so as to help their users address the cost as well as the quality of care. Neither the topics for the guidelines nor the types of guidelines to be developed are necessarily being chosen with an eye toward reducing unnecessary expenditures. Further, the elements that are the most useful for cost control are not being incorporated sufficiently into guidelines.

Second, the laudable attention to rigor in guideline development processes has lengthened the process of developing a guideline. Despite the pressing and immediate need for guidelines, emphasis is being placed on producing new guidelines rather than on taking advantage of useful ones that already exist.

Third, little is known about how guidelines should be developed and used. The extent to which guidelines will actually improve patient outcomes, reduce the use of unnecessary services, and control costs is uncertain. There is a need to take steps to ensure that future guidelines are valid and produced efficiently.

Constructing Practice Guidelines to Help Address Both the Cost and Quality of Care

AHCPR can play an important role in the development of guidelines that address both the cost and quality of care. It can do this by setting appropriate priorities for the types and topics of guidelines to be developed, specifying the key elements of guidelines, and requiring that they be incorporated in all federally sponsored guidelines to the greatest extent possible.

Setting Priorities for Guideline Development. The ability of guidelines to promote care that is both efficient and effective is closely related to the way they are organized and the clinical topics they address. While diagnostic and management guidelines are clearly important for clinical decisionmaking, guidelines organized around services also need to be developed to provide practitioners, patients, and payers with information about appropriate and inappropriate indications for services. In choosing topics for guidelines, particular consideration should be given to areas in which inappropriate care is likely to be common and costly.

Incorporating Key Elements in Guidelines. Guidelines can be most effective in the federal strategy if they help users set appropriate goals for care; enable users to compare alternative approaches to care on the basis of benefits, risks, and costs; and contain other elements that permit them to be used in various ways to improve the value of care. These elements include ineffective approaches to care and clinical measures and target values; as well as statements of adjustments for differences among patients and resources; knowledge, skills, and resources required; and indicators of the process and outcomes of care. These elements should be based on information from clinical research. Until this information is available, assumptions about them should be addressed in the guideline. These assumptions can then be tested in actual practice.

Meeting the Short-Term Need for Practice Guidelines

Few of the guidelines now available have been documented to be valid and reliable — although many are probably at least as reliable as the information in medical textbooks — and none contains all of the elements that users may ultimately desire. Nevertheless, guidelines do not have to be perfect to play an important role in improving health care. Guidelines developed by credible processes and containing some but not all of the information discussed in this chapter would help their users respond to the need to control costs as well as improve quality. Such guidelines exist and should be used.

Identifying and Disseminating Useful Guidelines. Achieving this goal requires one or more entities capable of carrying out three complementary functions. First, a clearinghouse needs to be established to collect and catalogue all available practice guidelines. Second, criteria must be developed and applied to existing guidelines to identify which are likely to be useful. Finally, useful guidelines must be disseminated to physicians and patients.

The evaluative function is likely to be the most difficult one to carry out. Assessment instruments are available that describe many attributes of guidelines thought to be desirable (IOM 1992; AMA 1990). However, the relative importance of these attributes in making guidelines a useful tool to promote cost-effective care is not yet known, because there is too little information about what is essential to produce valid guidelines. Probably not all of the criteria must be met for a guideline to be useful; in fact, few if any existing guidelines would meet all of the criteria. To insist on ideal guidelines would risk denying practitioners and patients access to useful and urgently needed information.[14] It could also set standards for future guideline development that are more expensive and time-consuming than required.

To identify guidelines likely to be useful, criteria need to be established and weighted. Some criteria may be indispensable. Particular combinations of others might be permitted to satisfy requirements, so that deficiencies in some areas might be made up by strengths in others. For example, it would seem important that the potential for bias be minimized by ensuring that the participants in the process are balanced in perspectives and that group processes permit alternative views to be expressed. However, that a guideline panel lacked balanced perspectives might be compensated by strengths in the analysis and use of evidence.

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[14] The Institute of Medicine does not believe that guidelines must meet all of the criteria in their provisional assessment instrument. The instrument permits the guideline assessor to decide whether the failure to meet any particular criterion is important.

Other important criteria might include whether a guideline's developers used scientific evidence in a careful manner and whether the issues this chapter raises such as tailoring the recommendations to the types of patients typically seen were considered — even if there was not enough evidence to resolve the issues. An additional criterion that could be considered is whether guidelines covering the same topic, created by different processes or developers, reach the same conclusions.

Potentially useful guidelines should not necessarily be disseminated "as is." Evaluations would be particularly helpful if they explicitly identified the limitations of promising guidelines, making specific recommendations for improvements or suggesting restrictions in the way they should be used. Service guideline recommendations, for instance, could be limited to indications where the evidence about appropriateness or inappropriateness is strong or where consensus could easily be reached.

The clearinghouse, evaluation, and dissemination functions described here could be carried out by various types of entities. The Institute of Medicine has recommended that the entity should be a private, not-for-profit organization (IOM 1992). To ensure that these tasks are accomplished, however, the Commission recommends that AHCPR be charged with coordinating the effort, preferably with input from public and private organizations with interests in guidelines. These might include physician organizations, payers, hospitals, health maintenance organizations, and others.

Increasing the Effectiveness of Guideline Development Efforts. Despite the lack of information on the best methods for producing guidelines, guidelines still need to be developed. A reasonable approach in the short term would be for AHCPR and others to support the development of guidelines by processes that meet, at least, the set of minimum standards envisioned above for the evaluation of guidelines. The availability and use of the evaluation instrument would encourage this. Future development should focus on clinical areas in which guidelines are most likely to have the greatest impact on both costs and patient outcomes.

Ensuring the Efficient Development of Valid Guidelines in the Future

To realize the full potential of practice guidelines in the long term, the federal government's most important role is to ensure that knowledge is gained about the outcomes and effectiveness of treatments addressed in practice guidelines, the best methods for producing guidelines, and the ability of guidelines to meet their objectives in actual practice. The Department of Health and Human Services — and especially AHCPR — should place a high priority on funding research on these areas.

Supporting Clinical Studies to Provide the Information Needed to Develop Guidelines. The ability of developers to incorporate the needed elements in practice guidelines depends on their having access to the right types of data and scientific evidence. Research studies can be most helpful if they are designed to:

- identify and then focus on conditions and services where current care is likely to be inappropriate and costly;

- identify approaches to care that do — and do not — make a substantial difference in clinical outcomes that are meaningful to patients;

- identify short-term measures that are closely correlated with desired patient outcomes and the least rigorous target values that achieve these outcomes;

- provide information about costs as well as the effectiveness and adverse outcomes associated with different approaches to care;

- focus on patient populations similar to those that practitioners typically see in their practices; and

- identify when outcomes, clinical targets, and approaches to care differ for different types of patients.

Producing Guidelines More Efficiently. Ultimately, practice guidelines will be cost effective only if the resources spent to develop and disseminate them are justified by improvements in patient outcomes or reductions in health care expenditures. Little is known at the present time about the impact that guidelines will have. Several factors, however, can influence the efficiency of guideline development.

Much of the expense involved in producing guidelines is related to the processes by which they are developed, as has been noted. Currently, it is not known how rigorous these processes need to be to produce guidelines that are valid, reliable, and credible to their users. It is also not known at what point the quality of a guideline is improved only minimally by spending more time and resources on it. The guidelines movement would benefit greatly if efficient methods could be elucidated for compiling, evaluating, and synthesizing available scientific evidence; presenting scientific evidence to an expert panel; and convening and using a panel of experts to construct guidelines from available evidence.

Better coordination of research and development efforts could also result in cost savings. Currently, considerable resources are expended on clinical trials and outcomes/effectiveness research. The results of these efforts would be most fruitful if researchers were made aware of the information guideline developers need and if funding were targeted to studies designed to provide it. Better coordination among guideline developers would permit targeting guideline production to areas likely to have the greatest impact on outcomes and costs and would minimize unnecessary duplication of efforts.

Studying the Effectiveness of Guidelines in Actual Practice. The effectiveness with which guidelines can improve patient outcomes and control costs will probably never be known until they are put to the test in actual practice. Such studies could establish the safety, validity, and usefulness of guidelines that meet reasonable process and content criteria. They could also be employed to determine appropriate utilization and outcomes rates for use as norms in profiling (see Chapter 9).

Studies of guideline effectiveness can be done only if researchers have access to data about relevant aspects of the process, outcomes, and costs of care for a particular guideline. Achieving this goal will require information from a variety of sources, including claims data and condition-specific encounter forms (see Chapter 9). An "all-patient" database would facilitate these studies by permitting data to be pooled across payers and geographic regions (see Chapter 10).

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CHAPTER 9

REALIZING THE POTENTIAL OF PROFILING

The American health care system is facing serious challenges concerning cost and quality. Rapidly rising health expenditures are predicted to account for nearly 14 percent of the gross national product in 1992. The patterns and organization of medical practice vary widely across the country, but there is uncertainty as to what approaches work best and how care can be provided most efficiently. New and increasingly complex and expensive methods of diagnosis and treatment are continuously being introduced. At the same time, there is growing concern that a substantial proportion of patients may be receiving care that is of little or no benefit to them, while others are not receiving care that is known to be effective.

Recent responses to these challenges have linked efforts aimed at obtaining and disseminating information about appropriate, cost-effective approaches to care with incentives and systems that will encourage providers to put such information into practice. The federal government has made a strong commitment to funding medical effectiveness and outcomes research, and parties in both the public and private sectors have become actively involved in the development of practice guidelines. Financial incentives to hospitals, groups of physicians, and individual physicians have changed through the implementation of diagnosis-related groups, Volume Performance Standards, the resource-based Medicare Fee Schedule, and various forms of capitated practice arrangements. Attempts to manage health care have been growing, such as increasingly rigorous preauthorization and utilization review, policies limiting patients' choices of providers, and quality management techniques designed to identify problems and improve performance.

Many see an important role for profiling in these diverse efforts. Profiling is an epidemiologic technique that focuses the assessment of health care delivery on patterns of care rather than on individual occurrences of care. Information obtained from large databases is used to identify a provider's pattern of practice and compare it with those of similar providers or with an accepted standard of care. Theoretically at least, profiling can be an effective and relatively nonintrusive way to identify over- and underutilization of services, to uncover problems with the efficiency and quality of care, and to assess provider performance. This makes it an attractive and potentially useful tool for health care professionals, patients, payers, medical educators, and policymakers.

The expanding use of profiling is related not only to its broad applicability, but also to the growing availability of data on which it can be based, such as claims databases, and the spread and improvement of technology for processing this information. The availability of information may be outpacing the ability to use profiling effectively and responsibly, however. As profiling has become more widespread, diverse groups have raised concerns over the quality of the profiles themselves, the uses to which they have been put, and access to the information contained in them.

In January 1992, the Commission held a conference to learn about the appropriateness of present uses of profiling and to identify what will be required to realize the full potential of this technique as it continues to develop in the future. At this conference, a series of formal papers was presented addressing issues related to data needs, requirements for developing valid and relevant profiles, the impact of profiles on medical practice, and controversies surrounding public access to profiling information.[1] These issues were then discussed by a panel of representatives of the major constituencies affected by profiling, including public and private payers, physicians, Peer Review Organizations (PROs), consumers, and researchers.

This chapter is based, in part, on the content of that conference. It begins by reviewing the basic concepts that underpin profiling. The chapter then describes the roles that profiling can potentially play in quality improvement, assessment of provider performance, and utilization review. It continues with case studies illustrating the types of problems that have arisen in actual usage, followed by a discussion of the issues that need to be addressed to resolve them. The final section discusses the roles that profiling can play — in the short- and long-term — in achieving the goals of health care reform.

WHAT IS PROFILING?

Profiling is an analytic tool that uses epidemiologic methods to compare practice patterns of providers on the dimensions of cost, service use, or quality (process and outcome) of care. The provider being profiled can either be an individual practitioner, a group of practitioners, or a health care organization, such as a hospital or health maintenance organization (HMO).[2] The provider's pattern of practice is expressed as a rate — some measure of utilization (costs or services) or outcome (functional status, morbidity, or mortality) aggregated over time for a defined population of patients under the provider's care. The number of sigmoidoscopy claims an internist submits to the Medicare program per 100 Medicare patients he or she sees per year is an example of a profiling rate.

Comparisons in profiling are made by relating the utilization or outcome rate for a particular provider to a norm, which can be either a rate derived from the practice patterns of other similar providers, called a practice-based norm, or a rate that would be expected if providers followed an accepted practice guideline, called a standards-based norm. Practice-based norms do not necessarily reflect appropriate care. For example, the mean rate at which internists currently perform sigmoidoscopies for Medicare patients may be too high or too low. Standards-based norms reflect appropriate care to the extent that they are based on practice guidelines grounded in sound scientific evidence (see Chapter 8).

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[1] The papers that were presented at the profiling conference will be published by the Commission in April 1992 (PPRC 1992).

[2] The focus of profiling on the provider distinguishes it from technology assessment and outcomes research, in which the independent variables are the service and measure of outcome, respectively.

Profiles are usually designed to generate some type of action, which is taken if the utilization or outcome rate for a particular provider differs from the norm by a certain amount. For example, an internist might be notified by the Medicare program if his or her Medicare sigmoidoscopy rate is greater than two standard deviations above the mean for other internists practicing in the same community. Alternatively, if a standards-based norm is available for performing sigmoidoscopy in the Medicare population, all internists might be notified of the extent to which their rates are appropriate or inappropriate (that is, whether their rates meet the norm or are too high or too low in relation to the norm).

By focusing on aggregate patterns of practice (rather than on patterns of individual practitioners), profiling can be used to compare the medical care provided by different organizations or received by different populations of patients. For example, this type of profiling can compare the rate with which outpatient sigmoidoscopies are performed in different geographic regions of the country, the rate with which cesarean sections are performed in different HMOs, or the mortality rate following coronary artery bypass surgery in different hospitals.

WHAT ARE THE POTENTIAL USES OF PROFILING?

The exciting potential of profiling relates to the way it can theoretically be applied in three important areas: quality improvement, assessment of provider performance, and utilization review.

Application of Profiling to Quality Improvement

Quality improvement is geared toward identifying problems and overcoming them through changes in performance. In health care, problems are often indicated by poor or variable patient outcomes. Methods for improving outcomes may or may not be apparent, however, and may ultimately require changes on the part of physicians, nonphysician practitioners, patients, or health care systems.

Profiling can theoretically play a role in several aspects of quality improvement. First, it can be used to target potential problem areas by identifying conditions or procedures where there are large variations in outcome. Such profiles would measure differences in the frequency with which specific outcomes occur when patients with a particular condition or patients undergoing a particular procedure are cared for by different providers.

It can also be helpful in determining how and by whom performance should be changed to improve outcome. Through feedback and discussion of the results of an outcomes profile, for example, physicians may be able to identify specific differences in the process of care (not necessarily attributable to them) that are likely to underlie the differences in outcome. Such hypotheses can then be tested by running profiles on both the process and outcome of care, looking for correlations between the two, or by modifying the process of care across providers to see if, on reprofiling, differences in outcome are reduced or overall outcome is improved.

Application of Profiling to Assessment of Provider Performance

Valid methods for assessing provider performance are important to many parties for a wide variety of purposes. For example, they can provide a basis for making decisions about certification, credentialing, and granting of hospital privileges; monitoring compliance with practice guidelines or quality improvement measures; or choosing physicians, hospitals, and health plans by payers and perhaps by consumers as well. They can also be used to assess the effectiveness of medical training and to identify areas that may require more effective undergraduate, graduate, or continuing medical education.

Profiling potentially can play an important role in this regard since it can be used to identify providers who do and do not meet a certain standard of care. For example, for a particular condition or procedure, it may be possible to identify a specific process measure that is associated with appropriate, cost-effective approaches to care, such as a service that is an integral part of an accepted practice guideline. A particular provider's utilization rate for this service could then be compared with the rate that would be expected for providers who followed the practice guideline. Performance would be "acceptable" if the provider's rate does not deviate substantially from this norm.

Profiling is an inherently flexible technique for assessing provider performance. Depending on the purpose, the standard of care can be based on either practice guidelines (i.e., standards-based norms) or actual provider practice patterns (i.e., practice-based norms). Acceptable performance can be defined as a small or large deviation from the norm. The assessment can be focused (i.e., based on a profile targeted to one condition or procedure) or broad (i.e., based on the results of multiple profiles covering a wide range of conditions or procedures). Finally, the provider being assessed can be an individual practitioner or a health care organization.

Application of Profiling to Utilization Review

Theoretically, profiling can play a role in utilization review by identifying outliers for more detailed review or by encouraging more appropriate delivery of services by all providers. Both approaches could make utilization review more efficient, exempting most physicians from intrusive case-by-case review.

In the outlier approach, which is the usual way of thinking about profiling in this context, profiles are used to compare the rates with which individual physicians use particular services with rates in similar practices or with target rates based on practice guidelines. Outliers are defined as physicians whose rates deviate substantially from the norm. Detailed case-based review can then be targeted to physicians whose practices suggest a greater likelihood of over- or underutilization.

Profiling also has the potential to improve the frequency with which services are provided by the "average" physician. For example, in cases where a standards-based norm is available for a particular service, all profiled physicians could be notified of the extent to which their utilization rates differ from the norm. Practice guidelines could be distributed at the same time to inform physicians how they might change their behavior so as to use the service more appropriately. In cases where standards-based norms and practice guidelines are not available, it may be possible to bring physicians in a community together to review the profiling results. In some cases, they may be able to identify a utilization rate — or range of rates — they believe is appropriate and to suggest ways that physicians could achieve this rate without compromising patient outcome.

CASE STUDIES ILLUSTRATING CURRENT ISSUES IN PROFILING

Currently, many organizations are using profiling for utilization review and quality improvement, and there is growing interest in using profiling to assess provider performance. These applications have not always been straightforward, however. Concerns raised by various groups suggest that a number of issues will need to be addressed before the full potential of profiling can be delineated and realized. The following case studies illustrate some of the problems that have arisen and — especially in Case Study 2 — suggest ways in which some of the limitations of current profiles may be successfully overcome.

Case Study 1: Release of Mortality Data

Imagine that you are a hospital administrator and that your state health department has just released to the public coronary artery bypass graft (CABG) mortality rates for all of the hospitals in the state that perform this procedure. Your hospital's ranking is low. The board of trustees calls you in saying, "This looks bad for us; do something to make us look better."

You bring together all the cardiac surgeons who perform CABGs in your hospital. They ask a lot of questions about the profile on which the ranking is based, unconvinced that it reflects true differences in the quality of care. Among their questions and concerns are the following:

- What databases were used in the analysis? How were hospital data linked to mortality data? How accurate and reliable is the information in the linked database?
- How many CABG operations were performed at each hospital per year? How likely is it that the differences across hospitals are due to chance alone?
- Does the profile account for differences in the mix of CABG operations each hospital performs? (The surgeons would expect higher mortality rates for hospitals performing higher proportions of emergency CABG, CABG following angioplasty, repeat CABG, or multiple vessel CABG.)
- Does the profile account for differences in the patient population undergoing CABG in each hospital that could account for differences in mortality?
- What timeframe was used in the analysis? How likely is it that death during that period was related to the CABG rather than other causes?
- Does the ranking compare similar hospitals (e.g., tertiary care teaching hospitals) or all hospitals in the state?

After obtaining answers to these questions (to the extent possible), you meet with the surgeons again. They do not believe that the ranking provides them or the public with much useful information. The differences in mortality rates between closely ranked hospitals do not appear to be statistically significant. The design of the profiles accounts for some but not all of the important differences in case mix. More important, the surgeons do not know what CABG mortality rate would be appropriate in their hospital or what rate they should aim for, given the types of patients they see and the mix of CABG operations they perform.

You share with them the call for action from the board of trustees. Some surgeons suggest that the quickest ways to improve the ranking would be for the hospital to stop accepting all high-risk patients for CABG surgery, stop performing all high-risk CABG procedures, and try to keep all post-CABG patients alive in the intensive care unit for the profile timeframe, regardless of cost or prognosis. However, the surgeons do not believe that these approaches would do much, if anything, to improve the quality of CABG care.

You mention that the state has recently provided the hospital with CABG mortality rates for individual surgeons and that the board has asked you to consider discontinuing CABG privileges for surgeons with the highest rates. The surgeons respond that, because each surgeon in the hospital performs relatively few CABG operations per year and because each surgeon performs a different mix of CABG operations, the ranking of individual surgeons is likely to be even less reliable than that for hospitals. Even if it were not, they believe the approach would be shortsighted. The surgeons who would lose their privileges at the hospital would probably obtain them elsewhere, and the surgeons who retained their privileges would have little motivation to improve their care. You also mention that a local newspaper is suing the state for public release of surgeon-specific mortality rates. The surgeons wonder how the public will use this information — whether it will actually protect patients from incompetent surgeons or unnecessarily undermine the trust patients have in competent surgeons.

At the end of the meeting, the surgeons acknowledge that the profiling results may actually indicate true differences in CABG mortality rates across the state. Although they would like to know how CABG care could be improved in the hospital, they are frustrated because the profile does not identify where quality improvement efforts should be focused — for example, at anesthesiologists, surgeons, other members of the operating room team, the recovery room, or the intensive care unit — or how the process of care could be changed to improve patient outcome.

Case Study 2: Small Area Analysis

Now imagine that you are a health services researcher working for the health department in a small, predominantly rural, state. You have recently completed a profile of discretionary pediatric admissions. The results show substantial differences for a set of diagnosis-related groups in the number of admissions per capita (age- and sex-adjusted) per year across the state's hospital service areas. There is no evidence that these different admission rates are associated with any difference in outcome.

You ask a representative group of the state's pediatricians to review this information. They acknowledge that they do not know what the most appropriate admission rate is, but, given the outcome data, they believe that it is probably near the low end for the state.

You do more focused profiling in the medium- and high-rate areas to identify the proportion of patients each hospital and pediatrician is admitting. Then you convene all of the pediatricians in each hospital service area to review the results. This information is not made available to the public. Although the admission rates in the profile are not adjusted to account for differences in patient population characteristics (number and case mix) across providers, the pediatricians think the information is still useful since they are quite familiar with each others' practices. In most areas, possible causes for the higher rates are identified in the course of the discussion. For example, in one area most patients were admitted by two pediatricians who had recently set up practice. Reprofiling one year later shows that differences across hospital service areas, as well as the average admission rate for the state, have markedly decreased.

Case Study 3: Profiling of Physician Claims

Imagine that you are in charge of utilization review activities for a large insurer. You think it is likely that outpatient chest X-rays are provided more often than necessary and want to profile physicians on their use of this procedure. Using your administrative claims file, you are able to compare the rate at which physicians in a particular specialty and type of practice bill for CPT code 71020 (radiologic examination of the chest, frontal and lateral) per 100 patients insured under your program per year.

Not surprisingly, you note wide variation in chest X-ray rates. You inform physicians whose rate is higher than 95 percent of the other physicians in his or her peer group that they will be reviewed if their rate remains at this level for three consecutive years. Other physicians do not receive reports of their chest X-ray rates.

You receive written responses from most of the outlier physicians. They question the validity of your results, offering the following reasons:

- Their identification number represents a group rather than an individual physician.
- Their specialty designation is wrong or they are a member of a specialty that your insurer does not distinctly recognize.
- They provide chest X-rays in their office whereas most of the other physicians in their peer group refer patients who need chest X-rays to a radiologist.
- They see more patients with cardiac or pulmonary conditions than other physicians in their peer group.

One physician, who is the medical director of a preferred provider organization, questions whether your efforts will do much to accomplish your goal of encouraging more appropriate, cost-effective care. The medical director agrees that chest X-rays are probably overutilized and that this is probably the case for most, if not all, physicians. However, this physician notes that your approach is targeted at only 5 percent of physicians and that most of these physicians believe there is a good reason explaining his or her deviation from the norm. Even if the surveillance causes some or most of these physicians to change their practice patterns, the remaining 95 percent have no incentive to change since they have not been provided with any feedback. More important, the appropriate chest X-ray rate is not known, and guidelines are not available informing physicians which of the chest X-rays they are currently ordering or performing are not needed.

DEVELOPING AND USING PROFILES TO IMPROVE MEDICAL PRACTICE

The cases described above highlight some of the issues that must be resolved before the full potential of profiling can be realized. This section explores what is required to develop valid and relevant profiles for various purposes. It focuses first on the data that underpin profiling, considering how well currently available databases satisfy profiling's needs. It then focuses on characteristics of profiles and systems of feedback that encourage providers to "buy in" and that enable them to take effective action.

Obtaining Data to Develop Valid and Relevant Profiles

Profiling requires three types of information: (1) clinically meaningful indicators of the process or outcome of care; (2) information to identify similar providers or to account for important differences across providers, such as differences in patient case mix; and (3) data that can be used to set utilization and outcome rates reflecting appropriate, cost-effective care. The ability to develop valid and relevant profiles therefore depends on the availability of accurate and reliable sources of these types of information. Databases now used for profiling may not be ideal in this regard since they were developed for other purposes.

Currently, most profiling is based on data from large administrative databases, such as claims files and medical records (primarily hospital discharge data and inpatient records). These databases are good sources of information about costs, billed services, and certain types of patient outcome, such as mortality, complications, and readmission to the hospital. Consequently, it is not surprising that they are most often used to generate profiles for utilization review and to examine morbidity and mortality.

Although available databases provide useful information for some types of profiling, problems related to making comparability adjustments and obtaining adequate observations make some of these profiles difficult to interpret. Available databases are not well-suited for supporting other types of profiling, particularly in the areas of quality improvement and assessment of provider performance. Many of the data that are most pertinent for these purposes — relevant indicators of the process and outcome of care and data that can be used to develop standards-based norms — are either difficult to obtain or cannot be obtained accurately or reliably through current sources. These data can be generated, however, through condition-specific encounter forms and other specialized instruments.

Comparability Adjustments. Since provider and patient factors can have a substantial effect on utilization and outcome rates, profile results are most meaningful if they compare the practice patterns of similar types of providers who care for similar patient populations. To make these comparability adjustments, data are required that can be used to characterize — accurately and reliably — relevant aspects of both the provider and the patient.

As suggested earlier in this chapter (Case Study 3), comparisons of utilization rates are more meaningful when it is possible to control for physician specialty and patient condition/diagnosis, and to distinguish the referring or ordering physician from the physician who actually provides each service. Medicare claims data currently include these data elements, but the codes that are used to describe physician specialty and patient condition/diagnosis are not interpreted or used uniformly. Administrative databases of other payers frequently do not include all of this information. Improvements in coding and modifications in claim forms that would facilitate making these comparability adjustments would not be particularly difficult to achieve. Yet they would make claims data much more supportive of utilization review profiling.

Interpretation of other types of profiles may require more sophisticated comparability adjustments than is necessary for utilization review (McNeil et al. 1992). For example, comparisons of morbidity and mortality rates (Case Study 1) are challenging because many provider and patient variables — some known and some unknown — contribute to complications following a particular procedure. Known variables can often be abstracted from the hospital record. But this is an expensive process, which may be unreliable if clinicians do not always document pertinent findings or if there are errors in abstraction.

Number of Observations. Unless a service is provided frequently or an outcome occurs often, the number of observations in a profile may be insufficient to ensure that differences in rates across providers are not due to chance alone. Although currently available databases contain information on thousands, in some cases millions, of patients, the frequency with which an individual physician performs a procedure over the course of a year or the frequency with which an adverse outcome occurs following this procedure may not be high enough to detect statistically significant differences. To some extent, this reflects the fact that each claims file covers only a portion of a provider's practice. Comprehensive databases covering all patients that a provider cares for are more likely to provide an adequate number of observations. This could be achieved by linking data sets across payers (see Chapter 10). But even so, observations for a particular service or condition may be insufficient, requiring profilers to aggregate utilization or outcome rates across groups of providers rather than to profile rates of individual physicians.

Relevant Indicators of Process and Outcome. Profiling for assessment of provider performance and for quality improvement both depend on having data about clinically meaningful aspects of the process and outcome of care. If the purpose of a profile is to monitor compliance with a practice guideline, the profile should measure the utilization rate for a service that is an integral part of the guideline's process of care. For a diabetes guideline, for example, it would be meaningful to follow the rate at which providers order glycosylated hemoglobin tests (a measure of overall blood sugar control that is useful in making decisions about therapy) but not the rate at which they order random blood sugars (which are generally not helpful in making management decisions). To be most helpful in improving the quality of care, a profile should measure aspects of the process of care that are closely correlated with patient outcomes and short- and long-term outcomes that are substantially influenced by the process of care.

Available databases are not particularly good sources for this type of information. Claims files do not contain information about many pertinent aspects of the process of care, such as medications and preventive services, both of which are often uncovered; postoperative visits, which are included in global fees; aspects of the history and physical examination, which are included in visits; and laboratory and imaging results. Many of the most meaningful patient outcomes, such as functional status or condition-specific indicators of morbidity, are also poorly documented. Medical records should be an excellent source of relevant information for profiling. But some of these data may be unreliable since physicians may fail to document all of their findings or all of the services they provide. Moreover, since data must be abstracted, obtaining information from medical records is often costly.

Other types of databases have been developed to provide more targeted information for profiling (Brand et al. 1992). Patient satisfaction instruments have been used to assess functional status, both generically and in relation to particular chronic conditions. Special purpose instruments have been extremely useful in obtaining information about the process and outcome of care for particular conditions. For example, a condition-specific encounter form developed to measure compliance with a practice guideline covering emergency department management of soft tissue injuries obtained information about elapsed time since the injury, tetanus immunization history, location and history of the injury, characteristics of the injury, and evidence of deep structure involvement (Brand et al. 1983). This information was available in only 4 percent of abstracted medical records. Work is also currently underway to obtain information from ambulatory medical records and to develop and implement computer-based medical records.

Appropriate Utilization and Outcome Rates. Meaningful profiles for assessing provider performance require utilization and outcome rates reflecting appropriate, cost-effective care. These rates are used as standards-based norms for determining whether a provider's performance meets an accepted standard. Such rates cannot be derived from current practice patterns of providers, since practice-based norms do not necessarily reflect appropriate care.

These rates should be available to be generated in the future by profiling providers who care for patients with particular conditions according to valid practice guidelines (see Chapter 8).

Enabling Providers to Take Effective Action

The ultimate objective of profiling is to change medical practice for the better. Although payers, consumers, and credentialing bodies can take action on profiling results — using them to choose "good providers" and to sanction "bad apples" — this alone will probably do little to make American health care more appropriate and cost-effective overall. To play a role in achieving that goal, profilers will need to focus on providers as the agents of change, developing profiles and systems that will stimulate them to review and improve their patterns of practice.

Developing Actionable Profiles. Providers will probably be reluctant to change their behavior unless a particular profile convinces them that action is warranted. For profiles using practice-based norms, this means they need to believe that their practice pattern is actually different (or is likely to be different) from that of comparable providers caring for comparable patients in comparable practice settings. For profiles using standards-based norms, providers need to believe that the practice guideline on which the norm is based is valid and applies to their patients and practice setting (see Chapter 8).

Change also requires that a profile be actionable. In other words, the provider needs to be able to identify a specific change in the process of care that would be likely to bring his or her practice pattern closer to the norm without compromising, or while improving, patient outcome. For reasons discussed earlier in Case Studies 1 and 3, neither CABG mortality rates nor chest X-ray utilization rates are particularly helpful in this regard.

These issues can be addressed, to some extent, by improving the quality of profiles themselves. Where data are available or can be obtained, it may be possible to develop profiles with more sophisticated comparability adjustments. It may also be possible to develop more actionable profiles by honing in on the specific patient population for whom the process or outcome of care varies most across providers. For example, profiles documenting high cesarean section rates do not dictate a corrective action. But if these high rates are associated with low rates of vaginal births after prior cesarean section, then the high cesarean section rates can probably be lowered by encouraging women who have had a prior cesarean section to undergo a trial of labor.

The Convener Function. Effective change can also be encouraged through proper supporting structures. Feedback of profiling results has been shown to be successful in improving provider performance (Schoenbaum and Murrey 1992). This is particularly true when the profiling entity acts as a convener, bringing providers together to interact as a group in interpreting profiling results. In situations where the convener function has been used, providers have been able to compensate somewhat for the limitations of profiles and to identify effective courses of action. As described in Case Study 2, for example, they have been able to make comparability adjustments based on their knowledge of providers' practices, to identify reasonable target rates, and to come up with ways of achieving their target rates without compromising patient outcome. In cases where the convener has been experienced in research, providers have been able to identify aspects of the process of care that are likely to be responsible for differences in outcome, leading to fruitful follow-up studies (Keller et al. 1990).

Although the convener function has been used most often in the context of quality improvement, it also has important applications to utilization review. For many services, inappropriate utilization is likely to be common, yet appropriate utilization rates are not known and practice guidelines identifying appropriate and inappropriate indications for using the service are not yet available. In these cases, identifying outliers on the basis of practice-based norms may overlook many providers who over- or underutilize the service. Providing feedback alone will not give providers the information they need to take corrective action. Convening providers in a community to review the profiling results may, in some cases, make up for these limitations. Using the utilization rates as a starting point for discussion, they may be able to identify reasonable, if not necessarily appropriate, target rates and courses of action to follow.

USING PROFILING TO MEET THE GOALS OF HEALTH CARE REFORM

Profiling is clearly not the answer to the nation's health care problems. Nor can its potential in many areas be realized at the present time, primarily because of problems with the underlying data. Yet profiling can probably play an important role in meeting the goals of health care reform. It appears to be a very useful tool for uncovering potential problems with the quality and efficiency of care. More important, when put in the hands of groups of physicians, profiling results can serve as an effective stimulus to action, even when the profiles themselves are imperfect and when the appropriate approach to care is not known.

Short-Term Goals

In the short-term, profiling would seem to have three useful applications, meeting the needs of physicians, payers, and policymakers. First, it can provide physicians with a tool to help them respond to Volume Performance Standards at a time when few valid practice guidelines are available. Profiling can provide physicians with valuable information about their patterns of practice, describing how they differ — in terms of utilization and outcome — from the patterns of others. Although much of this information is currently limited, it can nonetheless be very helpful to physicians, especially when presented in the context of a structured group process. In the course of exploring reasons for variation in profiling rates, physicians may be able to learn when they are providing services that are not beneficial to patients and when they are not providing services that are. This can help them identify ways to reduce the volume of certain services without compromising the quality of patient care.

Second, profiling can help both payers and physicians by improving the effectiveness and efficiency of utilization review. Profiling can probably have the greatest impact on utilization rates, as well as minimize case-by-case review to the greatest extent, if it focuses on changing the behavior of the "average" physician. This will require that payers use the convener function, at least until practice guidelines and appropriate utilization rates are available. Physicians will have better information to act upon if claims data are more supportive of profiling. As described earlier, this could be achieved by improving coding, adding certain elements to non-Medicare claim forms, and linking databases across payers.

Third, profiling can be a useful tool for monitoring the effect of federal health policies on medical practice. It will be more effective in this regard as databases are more comprehensive and as methods are developed to assess the quality of care accurately.

Long-Term Objectives

Profiling potentially can play an important role in quality improvement and quality assessment. However, to use profiling for these purposes, other requirements must first be met. Both efforts depend on obtaining data about relevant aspects of the process and outcome of care for particular conditions. It is probably unrealistic to expect that this information can be obtained from claim forms or generic encounter forms. More likely, condition-specific encounter forms will need to be developed for this purpose. The burden of completing these forms will limit the number of conditions about which providers and patients can be profiled at any given time.

Two additional conditions must be met before profiling can be used to make valid assessments of the quality of a provider's performance (for example, for purposes of certification, credentialing, or granting hospital privileges). First, practice guidelines that can serve as accepted standards of care need to be identified or developed. Appropriate utilization or outcome rates must then be ascertained by monitoring use of these guidelines in actual practice (see Chapter 8).

Data Requirements to Support Profiling

Since the quality of profiles largely depends on the data that underpin them, improvement of available data sources is a high-priority task. The critical steps listed below focus not only on administrative data, which serve as the cornerstone of profiling, but also on sources that can capture targeted information that administrative data cannot provide.

- Methods need to be developed to describe and evaluate the quality of data sources, focusing on their accuracy, representativeness, accessibility, and relevance to the objectives of profiling. Some methodologic issues that should be addressed include the accuracy and completeness of diagnostic information, the development of valid methods to create denominator populations, and the specificity of procedure coding.

- Administrative databases should be made more supportive of profiling by improving coding, adding specific elements to non-Medicare claim forms, and making it possible to link databases across payers. Accurate and reliable information about physician specialty, patient condition/diagnosis, the referring/ordering physician, and the physician who provides each service should be recorded on all claim forms.[3] This will facilitate making comparability adjustments and creating denominator populations for profiling.

- An "all-patient" database — created by linking data sources across payers — should be developed to provide more representative data for profiling. This will improve statistical power and allow comparisons of profiles across payers and geographic regions. Achieving this goal, which is discussed in more detail in Chapter 10, will require a uniform claim form; uniform physician and patient identifiers; and standardization of codes for services, physician specialty, and patient condition/diagnosis.

- The development of data sources that can provide targeted information for profiling needs to be supported. Most important in this regard is the development of condition-specific encounter forms, which are also required to assess the effectiveness of practice guidelines (see Chapter 8).

- Users of profiles would benefit from having information that would help them assess the strengths and limitations of profiles, such as the sources of data, the quality of the data, the number of observations, and any comparability adjustments that were made. Guidelines should be developed identifying the types of information that would best serve this purpose and the ways this information should be expressed. The federal government could set an example here by including user information with all profiling results disseminated by Medicare PROs.

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[3] If the payer has a central record of each physician's specialty, this data element can be ascertained from the physician identification number recorded on the claim form.

Developing an Infrastructure to Support Profiling

Achieving the short- or long-term goals of profiling requires an infrastructure capable of supporting three complementary activities. First, there must be a mechanism for collecting the necessary data, developing valid and relevant profiles from these data, and disseminating profiling results to appropriate parties. Second, some entity needs to act as a convener, bringing physicians in a community together in the context of a structured group process to educate them about profiling results and to help them take effective action. Finally, since profiling involves many different constituencies — practitioners, public and private payers, consumers, and researchers — processes are required to identify and respond to their diverse, and sometimes conflicting, needs and to facilitate their successful interaction.

All these activities would benefit from an infrastructure capable of organizing data and personnel in local health care communities and providing links between communities.[4] This could be achieved through state or local entities, such as the Community Health Management Information Systems sponsored by the John A. Hartford Foundation, that have some type of national coordination. Alternatively, the structure could comprise a national entity with state or local branches, such as the Health Expenditure Board/State Consortia/Quality Board infrastructure proposed in recent health care reform legislation (S. 1227). Any successful profiling infrastructure will require a manpower strategy to ensure appropriate training and utilization of personnel at the local level. In the coming year, the Commission will explore initiatives in the public and private sectors to identify models best suited to serving this purpose. Potential short- or long-term roles for Medicare carriers and PROs in the profiling infrastructure will be considered.

The convener function in profiling requires not only effective educational and feedback techniques, but also an infrastructure that can encourage and enable independent physicians in a community to work together as a group. As part of its upcoming work plan, the Commission will study group processes that are now being used to support feedback and the use of profiles by physicians. Of particular interest will be efforts by conveners other than staff- and group-model HMOs, such as researchers (e.g., the Maine Medical Assessment Foundation); PROs; independent practice associations; medical schools; and teaching hospitals. Other potential applications of the convener function will also be considered. For example, by creating "group practices without walls" (Berenson 1992), the convener function could play an important role in managing care as well as in profiling (see Chapter 12).

Facilitating interaction of the various parties affected by profiling will require an infrastructure capable of dealing with the difficult issues of confidentiality and access to profiling information. Some consumer advocates believe that the release of profiling information can protect the public from poor quality practitioners and hospitals by providing patients with information for choosing providers and, through the pressure of public accountability, by stimulating providers to improve their performance. On the other hand, sanctioning providers on the basis of profiling results may make them less likely to admit that they need to change their practices or to use profiling information to achieve quality improvement. As part of its evaluation of infrastructures to support profiling, the Commission will be particularly interested in determining the extent to which effective public representation in the profiling process — through, for instance, the development, interpretation, and use of profiling information — might be able to substitute for the release of profiling information in meeting the public's needs.

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[4] Infrastructures capable of supporting data needs are discussed in more detail in Chapter 10.

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CHAPTER 10

IMPROVING DATA TO SUPPORT COST CONTAINMENT AND QUALITY ASSURANCE

The lack of timely, comparable data has been a barrier to efforts to understand and manage the provision of health care services. The recent reorganization of Medicare data systems has begun to address this issue under the program. Yet much more work is needed to meet the shared needs of both public and private entities in this area.

The Commission is beginning to examine strategies to coordinate health services information systems. At a minimum, such a strategy would entail national standards for recording and processing data and protocols for the use of data at local, state, and national levels. Through such an approach, all public and private health services data could, in a sense, be considered part of a national health services database.

This chapter will present a framework for analyzing the availability of data needed to facilitate current and emerging efforts in the areas of cost containment and quality assurance. Principal objectives that would benefit from better integrated data systems are highlighted first. Then, an approach to improve the availability of data to meet these objectives is outlined. A preliminary core of data elements that could provide a focus for improving data more generally over time is introduced. Finally, some of the ways in which health services information systems might be better integrated is described, along with a plan for the Commission's continued work in this area.

OBJECTIVES

The scale and scope of many current cost containment and quality assurance efforts go beyond the isolated activities of any one organizational setting, practitioner, payer, or consumer. Increasingly, these efforts require using information drawn from many payers and providers. Four broad objectives that are significantly hampered by the current data environment are:

- improving the administrative efficiency of health service payment systems,
- monitoring the provision and cost of services,
- profiling, and
- effectiveness research.

These issues are highlighted here to provide a context for further discussion below.

Administrative Efficiency

Better coordination among health service payment systems is needed to reduce the administrative burden they currently involve for providers and patients. Today, providers face highly diverse claims-making procedures across many payers. Notable among these are various coding standards and forms that are required to report very similar information. For instance, while physician services are commonly reported on a document similar to the Health Care Financing Administration's (HCFA) form 1500, the specific data elements actually required on the form may differ from one payer to another. Coding specifications may differ by payer for those data elements that are required. Supplemental documentation requirements, perhaps to justify the provision of a specific service, also vary markedly among payers.

This environment can make the efficient coordination of benefits difficult for payers. Patients may be covered by more than one policy, such as when they have supplemental insurance for service expenses above standard benefits or they are covered by more than one primary insurer (e.g., dual coverage through their spouse). One insurer's reporting requirements may need to be translated to meet the needs of another. These same differences in claims making requirements also inhibit the implementation of electronic claims processing protocols, which require more standardized formats.

Patients may also find current payment procedures difficult to manage. This can be the case, for example, when insurers are slow to reimburse providers because appropriate documentation does not accompany a claim and the provider, in turn, bills the patient. The patient may be put in the position of mediating payment between the provider and the insurer.

Establishing uniform claims processing requirements, based on a standardized encounter form that includes basic data elements all providers use, is a necessary first step toward improvements in this area. Standardized encounter or claim forms would streamline the payment process itself. Data definition and coding standards for the information recorded in the payment process would significantly enhance the comparability of administrative data across payers and providers. Standard procedures for identifying practitioners and patients would provide a means to link those data to serve other broad objectives outlined here.

Monitoring the Performance of the Health Care System

The public — as patients, as taxpayers, and as third-party payers (e.g., under Medicare and Medicaid) — has an interest in monitoring how well the health care system meets its needs. In the face of rising and seemingly uncontrollable costs, it is increasingly important to understand where health care dollars are spent, what services that money buys, and how those costs are apportioned among third-party payers and patient populations.

The private sector is faced with the same concerns on a smaller scale. Employers, for instance, may want to compare the cost of services furnished by competing provider organizations. The common frame of reference required to make such comparisons is difficult to achieve when the detail and quality of available data vary among payers.

Within Medicare, many of these analytical questions can be addressed, since HCFA's administrative files include data such as service codes, patient and provider descriptors, and associated charges and reimbursement amounts. Moreover, HCFA has reorganized its data network under a new National Claims History (NCH) file system that will significantly improve its ability to link Part A (hospital) and Part B (physician) payment records to monitor systemwide activity. The effects of system reforms, such as prospective payment for hospital services, can be measured in terms of costs, shifts in the use of particular services, including substitution effects of new procedures, shifts in where services are provided, and more. The NCH system is also improving the timeliness with which data are made available.

Few routine sources of dependable data on private sector activity, both as compared to the Medicare program in general and as a consequence of Medicare system reform in particular, currently exist, however. Medicaid data systems, which vary from state to state, also inhibit such analyses. Moreover, data on service use by the uninsured are virtually nonexistent. Generally, efforts to examine the U.S. health care system as a whole are seriously hampered by the lack of coordination in health care data standards and systems. Where data do exist, the proprietary concerns of private payers often preclude their use for public policy purposes.

Data on the use and cost of services across all payers are already needed to assess the impact of payment reform under the Medicare program. For example, the Commission is attempting to study how access to services is affected by changes in payment rates under the Medicare Fee Schedule (see Chapter 3). Important aspects of this work include gauging the effects of changes under the program on private sector payers and those payers' subsequent responses. Without better private sector data on service use and costs, this examination will be significantly limited.

The availability of such data will be even more important as movement is made toward broader system reform in the future. Congress is considering several proposals, such as all-payer rate setting or single-payer systems, that involve setting rates beyond the Medicare program. These proposals typically incorporate the relative value scale that underlies the Medicare Fee Schedule (i.e., to establish relative payment for services), as well as mechanisms to update fee levels based on how expenditures grow over time, such as expenditure targets or expenditure caps.

In the absence of more detailed data than is now available, implementing these reforms would require setting initial rates (and updating them on a regular basis) based on information drawn from many disparate data sources. If enacted today, this would depend largely upon payer-reported numbers from existing data sources, estimates of service use and costs based on incomplete data, and survey data where more comprehensive information is not available. A considerable effort would be required to assimilate these data with little guarantee of confidence in the results.

As noted above, standards for defining and coding administrative data included in the claims process would significantly enhance the comparability of data across payers and providers. Such standards would make it possible to link and aggregate the basic information needed to monitor the provision of health care services across all payers in a more efficient and timely manner than is possible today.

An equally important aspect of this objective is monitoring the quality of services provided. Assessing and improving the quality of care will require much more detailed information, particularly clinical data associated with the process of care. But improving the comparability and availability of administrative data alone would establish a preliminary basis for linking health services data generally across sources. In time, that linkage could include clinical data sources.

Profiling

A better system to link data sources is also needed to take advantage of increasingly sophisticated tools being used to monitor provider practices and service use at a population level. Profiling, for example, is an analytic tool that provides a means to compare practice patterns of providers on the dimensions of cost, service use, or quality of care (see Chapter 9). Profiling is being used increasingly because of the growing availability of large volumes of routine administrative and clinical data, its potential to educate physicians, and its promise as a substitute for individual case review. Its applications include improving the quality of medical practice, facilitating the assessment of system performance (e.g., population-based profiles to monitor Medicare Volume Performance Standards), and utilization review.

Profiling can be used to compare individual practitioners, groups of practitioners, institutions such as hospitals, or payers. The service use patterns of populations can also be profiled. In each of these cases, sufficient observations are required to make meaningful comparisons. Those observations need to include appropriate indicators of process (e.g., specific services provided), outcomes (e.g., mortality), and the cost of care. In addition, data are needed to identify comparable providers (e.g., specialty) or to adjust for relevant differences, such as patient mix, at the provider or population level (e.g., diagnoses and patient demographics).

While profiling is already being used within individual organizations, its application is limited when comprehensive data are needed from multiple data sources. Population-based profiling, for instance, would involve assimilating data from all relevant payers to allow comparisons across geographic regions. Individual payers are now limited in their ability to profile physician practices because they record only the practitioner activity associated with their plan, whereas practitioners may furnish services through many different payers. Additionally, small provider groups, which may retain data on their entire practice, may not be large enough to form an appropriate practitioner base for comparison. Individual practitioners may need to be grouped when the service being examined is not furnished frequently enough by any single practitioner.

Realizing the potential of profiling as a means to compare providers and populations will require a common language to describe the nature and process of care (i.e, administrative and clinical data definition and coding standards) and a way to reduce the barriers associated with combining data from many sources. Uniform standards for recording administrative data that include personal identification (ID) numbers and diagnoses would make it possible to build the necessary linkages across payers and providers to facilitate profiling. They would also provide a basis for collecting more detailed clinical information once condition-specific data requirements have been established. At the same time, a better system is needed to link data across payers and providers. Health data systems designed to address these issues would make it possible to conduct profiling on a community, state, regional, or national basis.

Research on the Cost and Effectiveness of Care

Information will need to be linked and gathered from many sources to conduct research to ensure that methods of diagnosing and treating patients are effective and that care is provided at the lowest possible cost. In contrast to the provider or population orientation of profiling, this research involves a focused examination of the process and outcomes of specific treatments. Moreover, it requires assimilating information from both administrative and clinical data sources.

Effectiveness research depends upon an array of practitioner and patient-specific longitudinal data covering the structure, process, outcomes, and cost of care. Structure of care includes system characteristics (e.g., type of provider organization), practitioner characteristics (e.g., specialty), and patient characteristics (e.g., comorbidities). Process includes technical style (e.g., test ordering) and interpersonal style (e.g., the patient's role in decisionmaking). Outcomes could include clinical endpoints (e.g., death), functional status (e.g., mental state), general well-being (e.g., health perceptions), or satisfaction with care (e.g., access) (Tarlov et al., 1989). However, the detail of data definition and relative importance of specific data items may vary from study to study. For example, one study of a given course of treatment may capture data from a longer post-treatment follow-up period than another.

On the whole, effectiveness research requires targeting data collection to address the needs of any specific study. Yet there are significant difficulties in linking appropriate data sources since different types of data tend to be held by different types of entities for different purposes. Because they are associated with reimbursement, administrative data related to claims are typically retained by third-party payers. Most clinical data are commonly retained by practitioners, or within provider organizations, since they are more directly associated with the process of care.

The character of different types of data affects their use and storage as well. Essential administrative data (i.e., for payment purposes) can be discretely defined in a limited number of variables. They are typically stored in some computerized form. Clinical data, on the other hand, more commonly reside in paper-based medical records today. There is little general agreement about what clinical information is essential to store routinely in computerized form, and the volume of these data is enormous.

Ideally, administrative data sets that include preliminary clinical indicators, such as diagnosis, can provide an initial frame of reference for effectiveness research (and profiling) and serve as an important link to more detailed clinical data sources. Those more detailed sources, from which targeted clinical data can be abstracted, could include medical records, condition-specific data collection efforts, tumor and cancer registries, Social Security files (e.g., for mortality data), hospital discharge data sets, and more.

Improved coordination of administrative and clinical data resources is needed to facilitate such efforts. Initial improvements in this area will involve establishing better linkage across data sources, particularly practitioner and patient identification numbers, and mechanisms (e.g., cost-effectiveness review boards) to organize the efficient use of data resources at local, state, and national levels.

IMPROVING THE AVAILABILITY OF DATA

Several important elements are missing from the current health data environment that would significantly improve the ability of payers and providers alike to achieve the kinds of objectives just described. Key among them are uniform data standards; the technical capacity to link information efficiently across payer and provider entities; and an organizational focus to integrate both the mutual and competing interests of payers, practitioners, consumers, and researchers. The most efficient way to address these issues is to approach them comprehensively. This section outlines such an approach.

The principal elements of a comprehensive approach to make comparable health services data widely available are:

- an all-patient database; and
- an all-patient data network.

The initial goal of this approach is to establish a solid frame of reference for administrative data maintained in any health information system. Standards for recording the basic detail of health services data would be established, essentially, to provide a common language for payers and providers. This would include, for example, a uniform set of required data elements, codes and definitions to describe that information, and data quality standards. The implementation of these standards would make it feasible to consider appropriate elements of public and private health care data as components of a comprehensive *all-patient database,* regardless of where they reside.

There would not be one central data bank under this approach. Instead, a network of local or regional data processing centers would be established to streamline the transfer of administrative information for payment and service-use tracking purposes. Parallel organizing entities would also be established to coordinate the use of these data. Together, the data processing centers and the organizing entities would make up an *all-patient data network* to meet community, state, regional, or national needs. As this network evolves, it could provide a means to link and assimilate more detailed clinical information on an as needed basis.

This approach would need to be implemented incrementally. The first step would be to define preliminary, or core, data requirements in view of the kinds of objectives outlined in the previous section and the capabilities of existing data systems. All payers and providers would have to maintain core data, such as type of service or type of practitioner, using standard definitions (e.g., Current Procedural Terminology — Fourth Edition [CPT-4] for physician services). The next step would be to introduce a uniform claim form that incorporates the core data elements.[1]

Then, some mechanism, such as a network of data processing centers, would be designed to expedite the transfer of information. Uniform claims could be submitted electronically for distribution to the appropriate payer, much as claims are now processed through regional carriers under Medicare. Eligibility files could be maintained centrally to facilitate verification of coverage and coordination of benefits between payers. Some accommodation would need to be made to include group and staff model health maintenance organizations (HMO) and the Veterans Administration in this network since they do not depend on a fee-for-service claims process. These groups do, however, commonly use some kind of encounter form that may serve as an alternative to a claim under this approach. Administrative data sets that are appropriate for use at local, state, and national levels could be established through such a network.

Many of the decisions about how these data are used can be made at the local level. Local organizing entities could be established to work in conjunction with the data centers to coordinate data use across practitioners and health care organizations. Communitywide quality assurance measures could be focused here. Profiling results of areawide provider practice could be disseminated to providers, payers, and consumers. These groups could organize the feedback process associated with profiling as well.[2] Moreover, these entities could provide a means to integrate practical (provider) and academic (researcher) interests in the practice of medicine. They could serve as links so that effectiveness research could be conducted across regions and nationally. Protocols could be developed for identifying research information needs, procuring the necessary data from providers that are willing to provide them, and disseminating research results.

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[1] Such a form would also accommodate other payer-specific reporting requirements.

A network of data centers and local organizing entities to coordinate the use of data has the potential to serve many interests at once. It could help reduce the administrative hassle associated with claims processing for patients and providers. For providers, it could lead to better, more standardized, and less intrusive utilization and quality review. Such a network could also result in the more precise implementation and monitoring of public sector initiatives, such as payment reform. And it could permit employers to compare provider entities more effectively.

A number of public and private efforts have already begun to address some aspects of this approach, though in a fragmented and uncoordinated way. The November 1991 forum of insurance industry representatives convened by the Secretary of Health and Human Services promoted ways to achieve administrative cost savings through data standards. Consequently, insurers are expected to reach some agreement in this area. The National Association of Health Data Organizations (NAHDO) is also working to achieve better data collection and standardization with a focus on state-level data systems. In addition, a coalition of HMOs has developed standards for reporting HMO performance measures to employers. The John A. Hartford Foundation of New York, in collaboration with local employers, is sponsoring the development of community-based information systems to address shared community needs for data. Some of these efforts will be described in more detail later.

As the Secretary's forum suggested, there is at least informal agreement about what administrative data standards for processing fee-for-service claims would entail. Clinical data will require much more consideration before such agreement can be reached. Nevertheless, there is enough common ground to begin to think about approaching data needs in a comprehensive way.

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[2] This "convener function" is intended to help providers take effective action based on profiling results. It is discussed in more detail in Chapter 9.

ESTABLISHING AN ALL-PATIENT DATABASE

The term all-patient database is shorthand for a concept that involves thinking about data stored in any health information system as part of a comprehensive database. An all-patient data approach would involve establishing specific data requirements for all payers and providers, as well as standard definitions and codes to record this information. This section introduces a preliminary core of data elements that could be used to initiate such an approach as an all-patient database and data network are put in place.

Core Administrative Data

The core data elements of an all-patient database would include those needed to describe what services are used, by whom, and how much they cost (Table 10-1). These data would provide a focus for initiating the process of standardization across payers and providers. The core data elements discussed here would not have to be introduced all at once, but would be incorporated in a formal database strategy as agreement is reached on their definition and use.

Even a small number of variables, maintained in a standard form across all providers and payers, would make it feasible to monitor the provision of health care services more efficiently and effectively than can be accomplished today except under Medicare. At a minimum, this information would include the number of specific services provided (i.e., by *type of service*) and the submitted and paid amounts associated with them for each relevant *category of payer. Submitted charges* are needed to establish the average charge associated with a given service. *Paid amounts* are needed to assign actual payments among payers (i.e., the insurer and the insured) and to account for discounting below submitted charges. Some indication of the *date and place of service* and *geographic location* are needed to aggregate services and costs across time and locality. Variables describing the practitioner and patient are needed to indicate the *type of provider* and the *patient demographics* of the population being served.

Collected across payers, these data could provide basic information about what individual communities or specific geographic areas are spending on health care and how they are spending it. They could be used to conduct limited population-based profiling of service activity across localities. Collected over time, they would contribute significantly to an assessment of the impact of the Medicare Fee Schedule on beneficiary and private payer behavior. These data may also make it possible to evaluate existing payment rate structures and consider the effects of implementing more comprehensive payment reform, such as an all-payer rate setting system.

Practitioner and *patient identification numbers* are needed to facilitate claims processing, including the verification of coverage and coordination of benefits, across payers. They

Table 10-1. Core Data Elements of an All-Patient Database

Service-Related Data

- Type of Service
- Submitted Charges, i.e., the actual charges submitted to the payer
- Paid Amounts, i.e., the portion of submitted charges that is actually paid, for the insurer and the insured, including deductibles, copayments, and balance bills where appropriate
- Place of Service, e.g., office, hospital
- Geographic Location of Service, e.g., zipcode
- Date of Service
- Condition/Diagnosis

Provider-Related Data

- Type of Practitioner, e.g., physician specialty
- Providing Practitioner Identification Number
- Ordering or Referring Practitioner Identification Number

Patient-Related Data

- Patient Demographic Information, e.g., age, gender
- Patient Identification Number
- Category of Payer, e.g., private, Medicaid, Medicare

would also provide a means to link data across data sources and, over time, to facilitate profiling and effectiveness research. *Referring* (or ordering) *practitioner identification numbers* and *patient diagnoses* (or conditions) are needed to make meaningful comparisons of the process of care.

Each of these data elements plays some role in routine claims processing, which forms the basis of payment for most physician services.[3] Currently, coding systems and definitions used to describe services vary across payers, data verification (and subsequently, data integrity) is undependable, and the ready availability of such data is markedly different from plan to plan. Formal agreement is needed to define these data to ensure that they are used and interpreted uniformly and that they meet the needs of many users.

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[3] Capitated systems, which do not use claims, and direct-pay patients, whose claims are not recorded by a third-party payer, are two exceptions.

Some informal standards for claims data already exist. As noted earlier, payers typically use computer resources to record the administration of claims. Services are very commonly recorded using CPT-4 codes. The International Classification of Disease — Ninth Edition (ICD-9) is routinely used for diagnoses. Common reporting forms required by Medicare (e.g., HCFA-1450 and HCFA-1500) have become de facto standards for reporting claims. Other data suggested here, such as geographic location or payer category, are, at a minimum, implicit in the claims process.

While existing coding schemes may be sufficient to classify some data elements, others are less subject to common coding standards. Place of service and type of practitioner are subject to wide variation in definition and coding across payers, as are the particulars of patient demographic information. In the case of physician specialty, for example, existing coding schemes will need to be more precisely defined since some payers may collapse important subspecialties into categories that are too broad. Other payers may define them more narrowly than is necessary for most purposes.

In the case of an ordering or referring practitioner ID number, which represents the practitioner who ordered the service or referred the patient when it is not the same as the one who provided the service, the use of existing features of the claims process (i.e., referring practitioner) could be redefined, or at least clarified. HCFA has recently introduced reporting instructions to accomplish this under Medicare.

Incorporating diagnosis will be a challenge, since its identification is more subjective than each of the other core data elements.[4] Difficulties inherent in current ICD-9 coding include the fact that many different codes can be used to express the same problem. In addition, patients may present with many problems, and the practitioner must decide which ones should be recorded. It may be easier or more appropriate to identify and record the presenting condition or symptoms. In any event, diagnostic data elements will be needed to make any meaningful comparisons of the process and outcomes of care.

Incorporating other data elements may be complicated when they are not included on the claim form itself. Patient demographic information, for instance, may be maintained separately from other administrative data in plan eligibility files. For Medicare, the type of provider is carrier assigned to each claim on the basis of physician-designated specialty. It is not included on a standard form HCFA-1500, and private sector payers do not tend to use this data element consistently. Data that are not needed on every claim, such as physician specialty or the detail of patient demographics, might be treated as they are now under Medicare. Regional data centers could link detailed demographic information to claims data during routine processing, much as carriers check beneficiary status under the program.

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[4] Diagnosis is now required by Medicare, but it is too early to evaluate how dependable it is.

Physician-specific information, such as specialty, could be maintained centrally, as it is now under HCFA's Unique Physician Identification Number (UPIN) system.

Health Maintenance Organizations

HMOs will also need to be included in a comprehensive approach. Group and staff model HMOs, in particular, will require special consideration because they have not, historically, maintained the type of claims-based administrative data systems that fee-for-service providers typically establish. HMOs blend the functions of payers and providers, which precludes the need for a formal claims process.

Since HMOs provide services on a capitated basis, relative payment amounts per service that are equivalent to core all-patient data payment amounts would have to be estimated based on service utilization counts, enrollment figures, and HMO standard costs or "shadow" prices. Such estimates may not, however, properly reflect HMO service costs, since HMO managed care represents a markedly different orientation toward the provision of services than insured fee-for-service care.

Other core all-patient data elements are more relevant to HMO operations. HMOs commonly track service use, for instance, through some type of encounter form that could serve as an alternative to fee-for-service claims forms as a source of core all-patient data. Moreover, HMO enrollee-specific administrative data would need to be included in eligibility files established within all-patient network data processing centers, since enrollees may move in and out of the HMO and may use emergency services outside the plan.

THE ALL-PATIENT DATA NETWORK

An all-patient data approach will also require a means to link health data systems. Data standards alone might be enough to facilitate the use of data across sources without the development of data processing centers to accomplish data transfer. In this case, improvements in the efficiency of claims processing would remain the purview of third-party payers. No formal link would exist between data sources. Comprehensive data on a communitywide basis, for instance, would have to be gathered from all available provider and payer sources through negotiations with each potential source.

It is more likely that some type of formal network will be needed to accomplish a wide array of objectives efficiently. Such a network would make it possible to maintain selected core data elements in a centralized place like data centers and to retrieve more detailed data from available data sources. Organizing entities charged to coordinate the use of these data could also be defined in more or less formal ways. This section describes some existing models for components of an all-patient data network and discusses how clinical data sources could be integrated as such a network is put in place.

Models for a Data Network

An all-patient database could be linked through a network of local or regional data processing centers. Network activity would be coordinated at the local level by local or state bodies representing a variety of constituencies, including practitioners, payers, and consumers. Data networks and coordinating bodies such as these are already in place, in some form, in the public and private sector. Some representative examples are described here to suggest the range of this activity. At the same time, these activities typically address the needs of one payer (e.g., Medicare), one class of payers (e.g., commercial insurers), or parochial interests alone. Consequently, the current health data environment is evolving in a fragmented and uncoordinated way. An all-patient data approach would seek to integrate, rather than replace, the wealth of current public and private efforts to improve the use of health services data.

The claims processing aspects of this approach are loosely based on HCFA's new National Claims History file system. Local carriers process claims through regional hubs, using explicit coding standards. Claims that do not meet those standards are returned immediately to the provider through the carrier. Claims data are forwarded to HCFA through the hub once they are cleared. The NCH system will make 100 percent claims-level data available to HCFA on a timely basis at the same time that it reduces local coding problems. These data comprise a very rich nearly real-time database on the use and cost of Medicare services.

A comprehensive data approach would take this idea a step further. One way to conceive of an all-patient data network is to imagine that every provider office would have a dedicated computer terminal for submitting claims. All claims would go to a regional center for distribution to the proper payer. As described earlier, these data centers would maintain eligibility files to facilitate verification of coverage, identification of copayment and deductible status at the time of service, and coordination of benefits across multiple payers. Payment could be made electronically. Data comparable to the core data elements needed for rate setting and cost containment purposes could be tapped and aggregated for routine reporting.

This type of network is well within the capabilities of existing technology. The growing use of electronic claims processing is based on rudimentary versions of this system through an uncoordinated network of private vendors. Private payers have begun to use centralized claims processing techniques, largely to speed the process and reduce associated administrative costs.

The National Electronic Information Corporation (NEIC) was formed by a consortium of major commercial insurance companies to facilitate electronic claims processing. Electronic claims, themselves, are less expensive to handle than paper claims. Computer processing reduces the time it takes to get and pay a claim. NEIC acts as a conduit for electronic claims — based on standard HCFA reporting forms — between providers and its payer members. NEIC payer members account for more than 85 percent of the total commercial claims dollars paid, and a growing number of their claims are processed electronically (NEIC, 1991). NEIC does not, however, retain payer-specific data for any appreciable length of time.

Another example of a private sector initiative in this area is the John A. Hartford Foundation's Community Health Management Information System (CHMIS). The Hartford Foundation, in collaboration with local employers, is sponsoring a series of community-level programs to integrate local health payment systems. This effort is based on the understanding that the mutual concerns of providers, payers, and consumers need to be addressed to improve health services generally. The CHMIS is intended to provide an efficient and unobtrusive way to meet a community's shared health care data needs.

Commonly, a CHMIS program will have two parts, which together form a CHMIS network of providers, payers, and consumers. One part is a transaction system designed to simplify claims processing and coverage verification. A uniform report form is submitted electronically to a central processor where it is reformatted and directed to the proper payer. The second part of the CHMIS program is a data repository that enables the use of the information to inform both cost control efforts and the management of care.

As data are processed through the transaction system, selected elements will be stored to create a patient-based information system that encompasses all local payers and providers. These data are expected to be used by employers, providers, insurers, and consumers to assess provider performance and facilitate other cost and utilization control measures. Ensuring patient confidentiality is an important element of the system's design (Hartford Foundation, 1991).

Integrating Clinical Data

The core administrative data elements that make up an all-patient database are intended to address the broad interests of many constituencies. Yet much more can be accomplished if clinical data associated with the process and outcome of care can be linked under an all-patient approach. Although existing claims processes suggest clear directions that the development of administrative data might take, it is less clear how clinical data would best be accommodated in better integrated health data systems. The breadth and volume of potentially relevant clinical information suggest that careful consideration needs to be made of the costs, administrative burden, and confidentiality issues their use entails. A few examples of the variety of ways in which clinical data can be approached are highlighted here. These are presented as complementary approaches to serve a variety of purposes rather than as mutually exclusive alternatives.

One approach involves defining a minimum data set that can serve as a kind of administrative database to address clinical issues. The Hartford Foundation, for instance, is sponsoring the development of a core clinical data set designed to complement the payment-related aspects of its CHMIS program. Clinical encounter forms identify key supporting information that varies with the type of encounter. The choice of specific clinical variables collected may vary from community to community. The resulting data set will be used to focus further clinical data collection efforts more precisely to meet locally defined data needs.

The Uniform Hospital Discharge Data Set (UHDDS) represents a similar minimum data option that was developed through the Department of Health and Human Services. The UHDDS consists of a minimum set of data that is collected on a retrospective basis from hospital discharge records or HCFA-1450 claim forms covering all Medicare discharges. More than 30 states have passed legislation to establish similar UHDDS files covering all discharges in their state, regardless of payer. Sixteen states have actually begun to collect data. These data sets have the potential to make a comprehensive core of inpatient data available across all states. Unfortunately, except under Medicare, data elements and definitions vary from state to state. The availability of these data also varies considerably, and individual identifiers are commonly removed from the data, which precludes some aspects of case-mix adjustment (e.g., prior service use) and establishing episodes of care. Hospital discharge data sets might be a better source of information if uniform data standards were maintained and these data were collected in every state.

Another option is embodied in HCFA's Uniform Clinical Data Set (UCDS). The UCDS is a system for abstracting clinical data. It is designed to facilitate peer review. In the course of medical records abstraction, it functions as a computer-based expert system to review inpatient care. The resultant UCDS records make up an epidemiological database to assess patterns of care and patterns of outcomes. At the outside, a UCDS record could accommodate more than 1,500 variables. Any given record will typically include more than 100 specific data items.[5]

While the UCDS performs important functions, such as defining sets of data needed to assess care and providing abstracting protocols for the collection of those data, it may have some important limitations. Where CHMIS represents a minimum set of data, the UCDS represents a kind of "superset." The result is an extremely large and potentially cumbersome data structure designed to accommodate the assessment of many clinical issues without necessarily focusing clearly on any one. Because the record structure is so large, only a sample of medical records is expected to be abstracted. The resulting UCDS files are not likely to be comprehensive. They focus primarily on small standard sample frames and the records associated with specific diagnoses, outcomes, and practitioners subject to special review. Although this is in keeping with the purposes HCFA intends under peer review, it may restrict the use of these data to limited assessment and research purposes. Finally, the current routine use of UCDS data is also largely prescribed by HCFA in the peer review scope of work. This limits, practically, their use for broader community-based purposes that may require data more tailored to specific community needs.

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[5] HCFA is also developing an ambulatory version of this system in the Wisconsin Ambulatory Review Project.

An alternative to the retrospective approach of the UCDS and UHDDS is to establish appropriate data protocols prospectively. United HealthCare Corporation, an HMO management group, uses structured medical record forms at the point-of-service to collect the data related to that service. This involves targeting specific clinical data rather than the generic superset of data the UCDS includes. These procedures are standardized across their plans. In this way, they will build comparable data sets on an ongoing basis throughout their network of HMOs.

Certain types of special-purpose information may need to be drawn from other more general sources. Mortality data can be drawn from Social Security files using patient IDs to link data sources. Tumor, cancer, and other disease-specific databases could also provide important supporting clinical information if a means to link those data sources exists.

Other specialized approaches may be appropriate for particular health care settings. Many HMOs have embraced the idea of reporting their plan activity based on ideal minimum administrative and clinical data sets. The HMO Group (a consortium of staff model HMOs), Kaiser Permanente (a group model HMO), and several large employers have developed the HMO Employer Data & Information Set to help ensure comparable reporting of HMO activity to the employer community. Standard reporting forms covering enrollment, utilization, and finances are provided, along with detailed instructions for constructing appropriate measures of performance in each of those areas based on specifically defined data.

The most comprehensive option for the better integration of clinical data would involve computerizing the entire patient record. This is clearly a long-range option with significant cost and confidentiality issues to resolve. Some work has already been accomplished in this area, however. The Institute of Medicine (IOM) is examining the development of computer-based patient records and a data system to facilitate their use. The IOM's Committee to Improve the Patient Record defined it as "an electronic patient record that resides in a system specifically designed to support users through availability of complete and accurate data, practitioner reminders and alerts, clinical decision support systems, links to bodies of medical knowledge, and other aids" (Dick and Law, 1991). An important aspect of the IOM's recommendations in this area is that a computerized record format needs to be developed in tandem with a national information management infrastructure to facilitate its shared use.

The Secretary's November 1991 forum and accompanying statement regarding uniform data standards also noted the potential of this type of approach. That forum highlighted the development of "smart" cards — wallet-sized insurance identification cards that could facilitate access to computerized medical record histories. This would enhance the transferability of records across providers and, ultimately, help reduce the administrative costs associated with medical history verification, records maintenance, and the use of such data for administrative and research purposes.

This broad array of options for making clinical data available suggests the need to focus more attention on how such efforts could be better coordinated, over time, to meet local as well as national objectives these data might serve. At the same time, and as the earlier discussion of profiling and effectiveness research indicates, clinical data elements beyond diagnoses used for the purposes of cost containment and quality assurance will need to be defined for specific purposes. An all-patient data approach (i.e., including data standards and a means to link data efficiently) could make it feasible to assume that decisions about what specific clinical data are needed for any given purpose can be made at the local, state, or national level — whichever is most appropriate. The role of an all-patient data network would be to facilitate the linkage of data for specific cost containment or quality assurance purposes. Data would be drawn from whatever clinical data sources are available and then be combined with appropriate administrative data sets (e.g., to make case-mix adjustments).

Confidentiality

One of the most important issues that needs to be addressed in developing an all-patient data network is ensuring the confidentiality of data on behalf of patients, practitioners, and third-party payers. This issue is of growing importance partly because information technology and the development of computer-based information sources have already begun to change the nature, extent, and timeliness of information routinely available in nearly every field. New and more sophisticated uses are being made of detailed health services data in particular (see Chapter 9).

Concerns for the confidentiality of health services data differ for various constituencies. The kinds of risks that might concern patients are the inappropriate use of health service histories on the part of third-party payers, employers, or government representatives. Practitioners, too, may be concerned about how data on their practice is used and made available. For instance, physician-specific data will be used to conduct profiling. While such assessment is already occurring for many practitioners, issues related to how profiling results are used, including their release to the public, need to be carefully considered. There is also growing concern on the part of providers about their increasing vulnerability to the risk of malpractice actions based on inaccurate or otherwise inappropriately used data.

Third-party payers may be concerned that their business interests will be threatened by the unauthorized use of financial and utilization information. Marketing strategies, payment differentials, and other important features of a payer's operation may be embodied in the procedure-level data on the use and cost of services that an all-patient data approach would encompass. Consequently, payers have a strong proprietary interest to restrict access to their data systems, which is likely to continue to inhibit the shared use of those data.

The Medicare data system is a good starting point for a model of how such data should be protected and access to it constrained. Access to government data systems is closely monitored, the use of individual-level data is restricted, that use is monitored carefully, and there are penalties for unauthorized or inappropriate use of those data. Similar restrictions would need to be put in place for non-Medicare data if an extensive all-patient database network were established.

The data network envisioned here would embrace several features that could help ensure the confidentiality of information. Since the network would include regional data processing centers, the detail of individual patient and practitioner identification would be maintained at that level to facilitate the kinds of functions mentioned earlier (e.g., coverage verification). As the network is put in place, strict protocols detailing rights of access and the circumstances under which data passing through the centers are aggregated or otherwise collected for any activity would be established. These protocols should define the uses to which potentially sensitive data may be put and the focus of responsibility for their confidential use.

WORK PLAN FOR AN ALL-PATIENT DATA STRATEGY

The development of a formal strategy to establish an all-patient database will require careful consideration of each aspect outlined here within the context of many mutual, and potentially competing, interests among both public and private constituencies. The core administrative data described above, for instance, are intended to encompass a diverse array of needs. Yet other data elements could be included or replace these, depending on the priorities established for the strategy.

A considerable amount of attention has already been focused, by both private and public groups, on examining the nature and definition of minimum data sets to serve a variety of purposes. Public groups, such as the NAHDO, trade associations, such as the Group Health Association of America, and others, such as the Hartford Foundation, have contributed to this effort. The joint effort of the National Committee on Vital and Health Statistics' (NCVHS) Subcommittee on Ambulatory Care Statistics and the HHS Interagency Task Force on the Uniform Ambulatory Care Data Set is particularly notable in this area. The core set of data outlined here is comparable to their recommended data set. The Uniform Ambulatory Care Data Set does include more detail in describing the location of providers and patients. It also includes disposition of the patient. This type of information may enhance the core all-patient data set. The role of such data in the development of an all-patient approach needs to be carefully examined.

Specific data priorities and standards will have to be defined in order to establish an all-patient data strategy that will serve both local and national interests well. Although much of the organization and responsibility for operating an all-patient data network would rest at the local level, some federal entity would be needed to set data and reporting standards, develop generic data-use protocols (local protocols for the use of data might also apply), facilitate the development of data processing centers, establish links between local coordinating bodies, and provide a means to collect and distribute aggregated data for national use. Such an entity would also be charged to ensure that a broad array of constituencies is included in the development and implementation of the strategy.

There are a number of ways in which the federal government could play a role in coordinating such efforts. To determine which roles might be most appropriate, the Commission plans to focus its work in several key areas.

First, the Commission will examine the nature and composition of a central coordinating authority to establish specific data priorities and standards. This entity would be charged to bring payer, provider, and public interests together in this area. This might be an independent federal board or a component of an agency with a broader mandate, such as a federal cost containment or health expenditure board. It might otherwise be a committee composed of representatives of existing organizations such as NAHDO, NCVHS, trade associations, and others. Other options will also be explored.

At the same time, the Commission will examine representative models for an all-patient data network. This will entail exploring alternatives that might be used to establish local or regional data centers and further study of existing models for coordinating the use of administrative and clinical data at local and state levels. As described earlier, for instance, data are processed regionally under Medicare, while they are processed and used at the local level under the CHMIS program. Another model for data processing could entail using existing data networks such as NEIC and Medicare carriers and encouraging the development of other components as needed. Local organizing entities, in this case, would be established separately, possibly in conjunction with existing Peer Review Organizations.

Finally, the Commission will continue to look at ways to improve data sources. This chapter has highlighted the considerable progress that has already been made, and the potential for agreement among interested parties, with respect to standardizing administrative data. During the coming year, the Commission will focus more closely on ways to improve clinical data and clinical data systems.

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CHAPTER 11

TRAINING PHYSICIANS TO MEET THE NATION'S NEEDS

Under the Omnibus Budget Reconciliation Act of 1990 (OBRA90), the Congress expanded the Commission's mandate, directing it to review and consider both the number and practice specialties of physicians in training and Medicare payments for graduate medical education. Although federal policymakers have long been interested in ensuring an appropriate number and mix of health professionals to meet national health needs, this directive reflects somewhat different concerns than previous debates. In particular, concerns have been heightened that growth in aggregate physician supply and imbalance in the distribution of physicians across specialties may stand in the way of other system reforms to contain costs and to encourage delivery of more cost-effective and appropriate care.

In addition to the Congress, several federal government agencies and major national foundations have expressed renewed interest in this policy debate. The Health Care Financing Administration (HCFA) held a conference in 1991 on the financing of graduate medical education. The Health Resources and Services Administration (HRSA), in conjunction with the Agency for Health Care Policy Research (AHCPR), has launched an effort to promote enhanced recruitment, training and retention of future primary care physicians.[1] The Kellogg Foundation has initiated a program supporting partnerships between academic medical centers and community-based primary care centers, and the Pew Health Professions Commission recently released its national agenda for reform of health professions education. Most recently, the Robert Wood Johnson Foundation announced its initiative challenging schools of medicine to increase the supply of generalist physicians and to work in collaboration with others in the health sector to create a more favorable practice environment for generalists.

These concerns touch upon a number of other policy issues to which the Commission has already devoted considerable attention. Among these are the determinants of growth in physicians' services, rural health delivery systems, and access to care for vulnerable populations. Moreover, the Commission has long viewed a resource-based payment system as a key tool to remove inappropriate financial incentives affecting specialty choice and geographic location. And as mentioned earlier in this report, policies affecting the supply and distribution of health professionals and mechanisms to finance their training have important implications for policies related to profiling of physicians' practice patterns, development of practice guidelines, and physician licensure and certification.

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[1] HCFA, HRSA, and AHCPR also jointly sponsored a national conference on primary care in March 1992.

Over the past year, the Commission has spent considerable time reviewing background information on physician supply and distribution, learning about related public and private sector efforts; examining the impact of previous policy initiatives; and hearing from physicians, policy experts, medical educators, and others knowledgeable in these areas. From these activities, the Commission has developed several working assumptions, discussed below, that will guide it in the coming year. It has also generated a series of questions to be investigated.

This chapter begins by presenting background information on trends and statistics that form the basis of the Commission's assumptions related to aggregate supply, specialty distribution, and the site of graduate training. It then considers the record of past policy initiatives in addressing these issues.

On the basis of these historical and current data, the Commission suggests that efforts to slow growth in aggregate supply and encourage training of primary care practitioners have been frustrated by continued growth in the number of residency positions, particularly in medical subspecialty fields. The discussion moves on to consider the role that mechanisms for financing graduate medical education play in determining the number and mix of trainees, as well as the tension between meeting the service needs of hospitals and providing appropriate training experiences for future physicians. The chapter concludes with a work plan outlining questions the Commission will explore during the coming year.

WORKING ASSUMPTIONS

After reviewing considerable data on aggregate physician supply, specialty distribution and the site of graduate training, the Commission has developed three working assumptions:

- The number of physicians exceeds, or will soon exceed, that required to meet national health care needs.
- The nation is training too many medical subspecialists and too many specialists in some surgical fields relative to the number of primary care physicians.[2]
- Many physicians lack appropriate training experiences to prepare them for practice outside the hospital.

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[2] There is an extensive literature on the definition of primary care. Some describe primary care by its functions (for example, health promotion, disease prevention, and evaluation and management of acute and chronic conditions). Others describe its attributes; these include first-contact, coordination, comprehensiveness, and longitudinality. For the purposes of this chapter, primary care is defined by specialty to mean physicians in general and family practice, general internal medicine, and general pediatrics.

In this section, data are presented that illustrate and support these assumptions. Although some may take issue with this approach and point to the need for additional research, it is the Commission's view that enough empirical evidence exists to justify moving the policy debate forward.

Aggregate Physician Supply

Physician supply has grown rapidly over the past three decades (Figure 11-1 and Table 11-1). The number of active physicians has more than doubled since the early 1960s, far exceeding growth in the U.S. population. Between 1965 and 1990, the number of nonfederal patient care physicians per 100,000 civilians grew from 124 to 198 (AMA 1992).[3] This ratio varies substantially across states, however. In New York, there are 339 nonfederal physicians per 100,000 civilians while the ratio in Idaho is 142:100,000 (AMA 1992).

Although there is considerable dispute over the most appropriate methodology for forecasting physician requirements, there is a general consensus that a physician surplus exists or will soon exist. The 1980 report of the Graduate Medical Education National Advisory Committee (GMENAC) predicted a surplus of about 60,000 physicians by 1990, increasing to more than 135,000 by the year 2000. More recent predictions by the U.S. Public Health Service's Bureau of Health Professions (BHPr) also suggest there will be a surplus, but only half as large as that predicted by GMENAC (Weiner 1989).[4]

There is less agreement about the implications of excess physician supply. Many argue that excess supply leads to provision of more unnecessary care, makes it more likely that physicians trained in narrow fields will practice outside their area of competence, drives up health care costs, and rarely results in a sufficient number of providers spilling over into underserved areas or undersubscribed specialties (Ginzberg 1983; Grumbach and Lee 1991; Schroeder 1984). Wennberg (1990) argues that when physicians do not have full practices, their desire to find new therapies and new ways of detecting disease will continue to push up costs. He thus cautions that increases in supply may offset any progress in containing costs that might be achieved as a result of effectiveness research and improved understanding of appropriate care.

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[3] In 1990, there were 615,421 allopathic physicians in the U.S. Slightly over 80 percent (503,870) devote the majority of their time to patient care (AMA 1991). There were also 32,297 osteopathic physicians (American Osteopathic Association 1991).

[4] Both the epidemiologic, needs-based approach taken by GMENAC and the demand-based alternative adopted by BHPr models have been much contested. In particular, the GMENAC model has been widely criticized for failing to foresee the declining productivity of physicians, consider adequately the effect of new diseases (particularly AIDS), and account for the combined effects of hundreds of small technological advances (Barnett and Midtling 1989; Harris 1986).

Table 11-1. Trends in the Supply of Physicians for Selected Specialties, 1965-1990

Specialty[a]	1965	1970	1975	1980	1985	1990	Percent Growth 1965-1989
Primary Care							
Family Practice	n/a	n/a	12,183	27,530	40,021	47,639	n/a
General Practice	71,366	57,948	42,374	32,519	27,030	22,841	(68)
Internal Medicine	38,690	41,872	54,331	71,531	88,862	98,349	154
Pediatrics	15,665	17,941	21,746	28,342	36,026	40,893	151
Internal Medicine Subspecialties							
Allergy/Immunology	910	1,719	1,716	1,518	3,060	3,388	272
Cardiovascular Diseases	1,901	6,476	6,933	9,823	13,224	15,862	734
Gastroenterology	633	2,010	2,381	4,046	5,917	7,493	1083
Neurology	2,174	3,074	4,131	5,685	7,776	9,237	324
Pulmonary Diseases	1,226	2,315	2,335	3,715	5,083	6,080	395
Surgical Specialties							
Dermatology	3,538	4,003	4,661	5,660	6,582	7,557	113
General Surgery	27,693	29,761	31,562	34,034	38,169	38,376	39
Obstetrics/Gynecology	16,833	18,876	21,731	26,305	30,867	33,697	100
Ophthalmology	8,397	9,927	11,129	12,974	14,881	16,073	91
Orthopedic Surgery	7,549	9,620	11,379	13,996	17,166	19,138	154
Otolaryngology	5,325	5,409	5,745	6,553	7,267	8,138	53
Plastic Surgery	1,133	1,600	2,236	2,980	3,951	4,590	305
Thoracic Surgery	1,477	1,809	1,979	2,133	2,183	2,063	40
Urological Surgery	5,045	5,795	6,667	7,743	8,836	9,372	86
Other Specialties							
Anesthesiology	8,644	10,860	12,861	15,958	22,021	25,981	200
Pathology	8,437	10,283	11,720	13,402	15,456	16,170	91
Psychiatry	17,888	21,146	23,992	27,481	32,255	35,163	96
Radiology[b]	9,591	12,492	15,070	18,701	22,996	23,904	149
TOTAL PHYSICIANS	**292,088**	**334,028**	**393,742**	**467,679**	**552,716**	**615,421**	**111**

Source: AMA 1992.

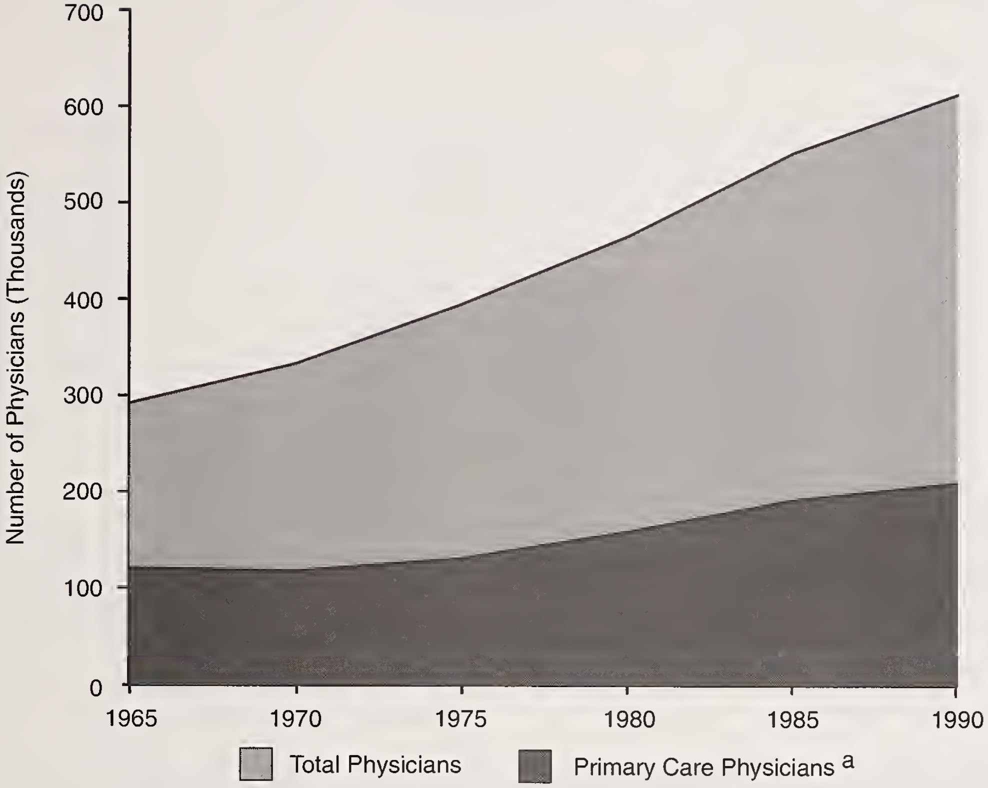
Note: n/a - Information not available.

( ) - indicates negative value.

[a] Specialty listings reflect 1992 self-designated practice specialty codes as described in the AMA masterfile.

[b] Radiology includes diagnostic, therapeutic and nuclear radiology.

Figure 11-1. U.S. Physician Supply, 1965-1990



Source: AMA 1992.

Note: [a] Primary care physicians are defined as family and general practitioners, internists, and pediatricians.

Others argue that, based on standard economic theory, there may be advantages to having an excess number of physicians or that a shortage of physicians has potentially greater social costs than an oversupply. The nation may actually need more physicians than previously predicted due to advances in medical technology, the growing burden of AIDS, and demand for care that may be created as a result of broader health insurance coverage. Harris (1986) suggests that an excess of physicians will lead to fewer "rationing disasters" and will be more conducive to innovations in health care delivery and in biomedical research.

Harris also argues that a physician surplus will make practice in metropolitan areas less attractive and therefore will result in improved geographic distribution. In fact, the gap in access to medical care between urban and rural areas closed substantially during the 1970s as more physicians moved out of urban centers to smaller towns. Even so, many argue that the current distribution continues to be unacceptable with primary care physician-to-population ratios in rural counties (population fewer than 10,000) about one-third of those in urban areas (PPRC 1991).

Similarly, Schwartz, Sloan, and Mendelson (1988, 1989, and 1990) suggest that an oversupply of physicians does not exist because physician incomes and work hours remain high; an increase in the number of physicians thus might have the beneficial effect of creating greater price competition among physicians and improving the availability of care. Others argue, however, that, at least in the United States, the market for physicians' services does not function like markets for other consumer goods. For example, price, volume, and physician supply have all been rising simultaneously, suggesting that physicians have the ability to affect demand for their services and raise prices in the face of increasing supply.

If expenditures for physicians services were constrained in the United States, as in many Western European nations, the findings of Schwartz and his colleagues might have deeper resonance. An oversupply of physicians in Belgium and Germany, for example, has been accompanied by dramatic reductions in physician income (Schroeder 1984; Iglehart 1991).

Specialty Distribution

Over and above concerns about aggregate supply, there is also a general consensus that the nation is training too many medical subspecialists and too many specialists in some surgical fields relative to the number of physicians trained in primary care. Two pieces of evidence support these conclusions. First, the United States has a lower proportion of generalists than other Western industrialized nations. Only 35 percent of American physicians are generalists compared with fully 63 percent of British physicians, and more than half of physicians in Belgium, Canada, and Germany (Figure 11-2) (Starfield 1992; AMA 1992). With the exception of the United States, these percentages reflect only physicians in general and family practice and exclude pediatricians and internists who, as a group, function as specialists abroad.

Second, the percentage of physicians in specialties other than primary care is growing, despite concerns that the current specialty distribution is already inappropriate to meet the health needs of the population. In 1989, only about 35 percent of U.S. federal and nonfederal physicians were in primary care specialties, defined as general and family practice, general internal medicine, and general pediatrics.[5] This represents a decrease of close to 15

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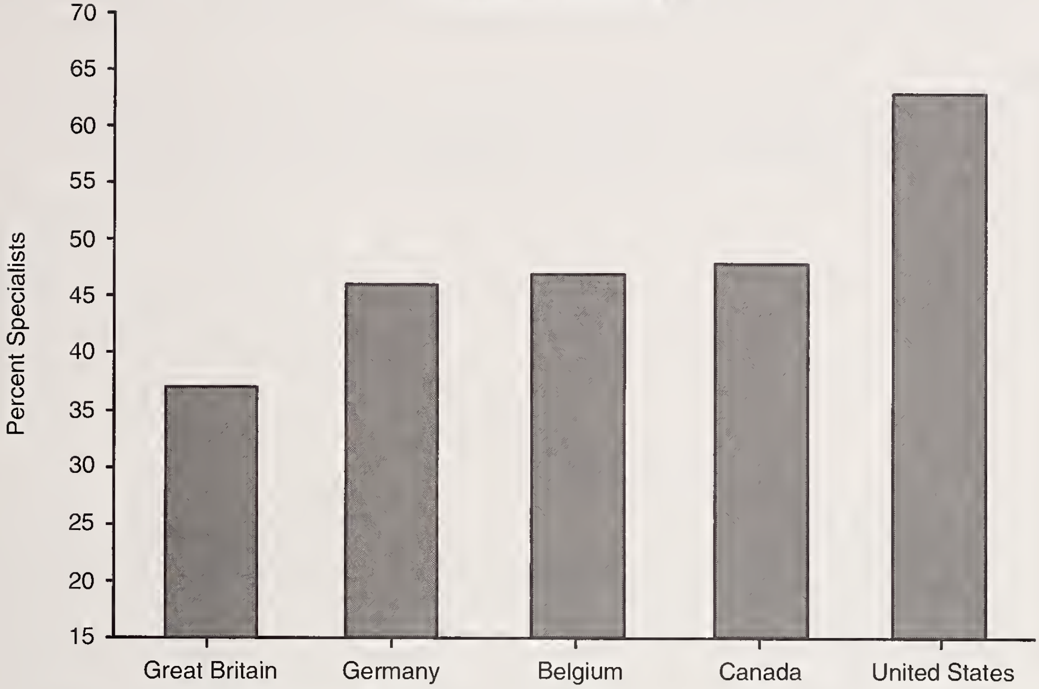
[5] Some analysts also consider obstetrician/gynecologists primary care physicians since they are an important source of first contact care for women. This boosts the percentage of primary care physicians closer to 40 percent.

Figure 11-2. Specialists as a Percentage of Physicians: Selected Nations [a]



Source: Starfield 1992, AMA 1990.

Notes: [a] For the United States, specialists are defined as all physicians except family and general practitioners, general internists, and general pediatricians. For all other countries, specialists are defined as all physicians except family and general practitioners.

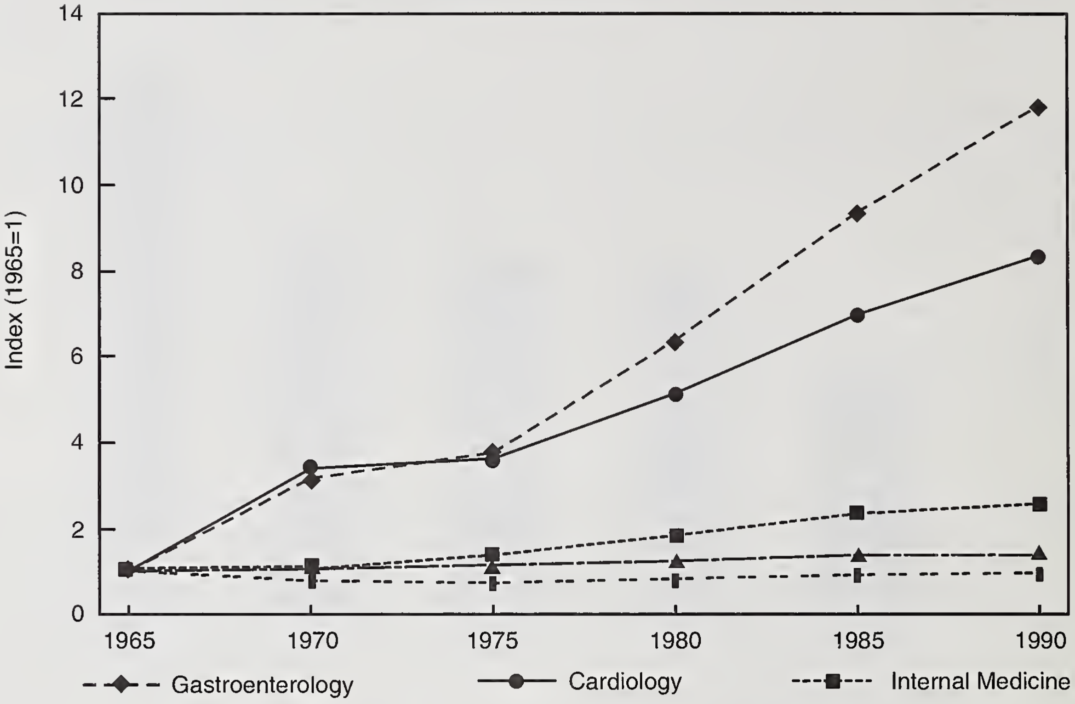
Reported years differ among countries; bars reflect data recorded between 1980 to 1989.

percentage points since 1963 and can be largely attributed to retirement of a generation of physicians trained as general practitioners and to the increasing subspecialization in internal medicine and pediatrics (Barnett and Midtling 1989). Projections suggest that the number of subspecialists in internal medicine will increase by 205 percent between 1978 and 1998, while the number of general internists will grow by only 77 percent (Kletke et al. 1987).

Among medical subspecialties, there has been substantial growth in the numbers of gastroenterologists and cardiologists (Figure 11-3 and Table 11-1). Other subspecialties such as pulmonary disease, rheumatology, and nephrology, are also growing rapidly (more than doubling between 1978 and 1988) but account for relatively smaller proportions of total physician supply (Kletke et al. 1987).

These trends are likely to continue in the near future. The proportion of medical school graduates expressing interest in primary care specialties declined from 36 percent to 23

Figure 11-3. Trends in the Growth of Selected Specialties, 1965-1990

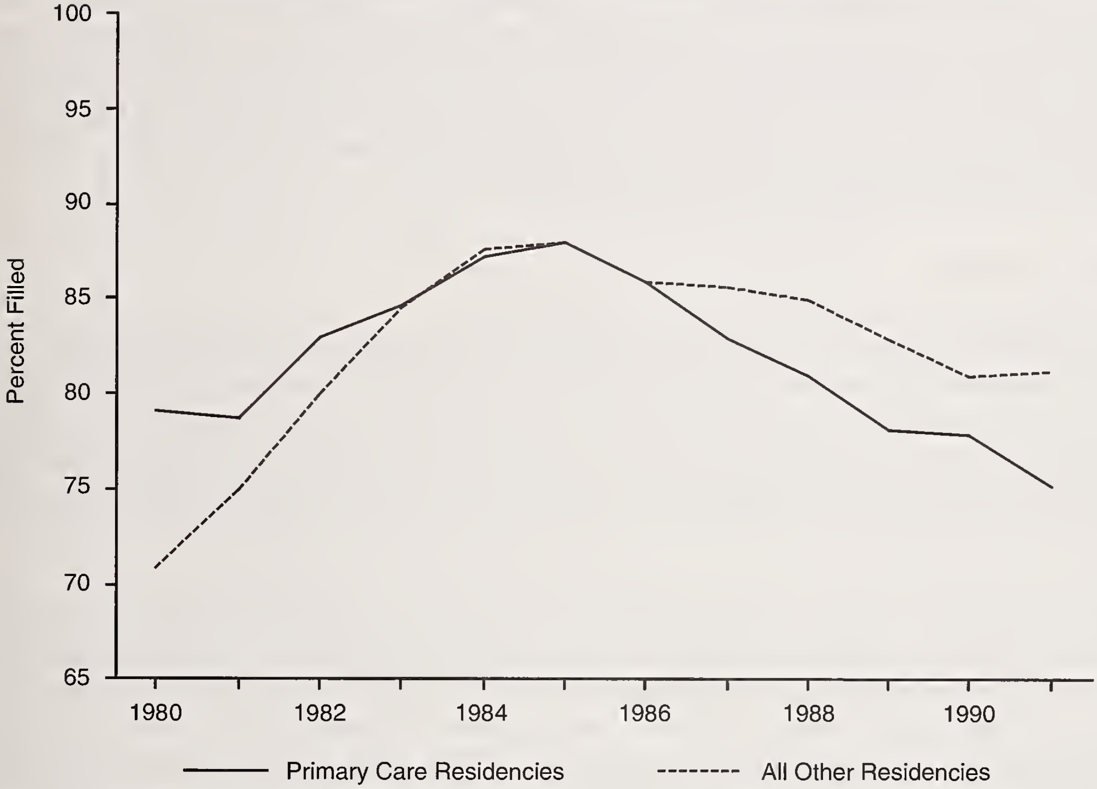


Source: AMA 1992.

percent during the mid-1980s (Colwill 1992). Fewer than half (40 percent) of graduates who begin training in general internal medicine are staying in generalist tracks. In addition, fill rates for primary care residencies have dropped in recent years. This reflects an increase in the number of positions offered as well as graduates' declining interest (Figure 11-4) (Politzer et al. 1991; National Resident Matching Program 1991).

Declining interest in primary care fields concerns policymakers for two reasons. First, some argue that as an epidemiologic fact, there is insufficient disease in the population to keep many specialists fully occupied in the area of their expertise (Sandy 1992). In fact, physicians trained to deliver specialized services provide a substantial amount of "first-contact" care, serving as primary physicians to about one-third of persons with a regular source of care (Aiken et al. 1979). While subspecialists may be well-suited to serve as principal providers for some patients (for example, those with certain chronic conditions), there are questions about the quality of care they provide outside their field of expertise (Payne et al. 1984).

Figure 11-4. Percentage of Positions Filled in the National Residency Matching Program (NRMP) by Category of Specialty, 1980-1991



Source: NRMP, selected years.

Note: Primary care residencies are defined as family practice, internal medicine, and pediatrics.

Second, growth in the proportion of specialists is thought to contribute to excessive growth in health expenditures. Specialty care may cost more because payment has traditionally overvalued surgical and technical procedures relative to evaluation and management services, and because specialists have received higher payments than generalists for the same service. But the research literature also provides considerable evidence that care provided by specialists is actually more intensive and more expensive than that provided by generalists. Specialists spend more time, order more diagnostic tests, prescribe more medications and schedule more return visits than generalists for patients with the same conditions (Engel et al. 1989; Greenwald et al. 1984; Manu and Schwartz 1983; Mendenhall et al. 1984; Noren et al. 1980). These differences often remain after controlling for case mix and severity of illness (Eisenberg 1986).

There is also a general notion that specialists have an orientation toward providing the services unique to their discipline. For example, a gastroenterologist may be quicker than a general internist to provide an endoscopy for a patient who presents with abdominal pain. This perception has not been rigorously examined, however, or differences in patient mix explored.

Less is known about the cumulative effect of these differences on total expenditures for physicians services, a question that the Commission plans to pursue in the year ahead. It has been suggested that aggregated over many thousands of visits, relatively small differences could translate into important practical differences in cost (Greenwald et al. 1984). Additional research is also needed to determine whether the more intensive medicine practiced by subspecialists results in better outcomes.

Site of Training

As mentioned above, the Commission's third working assumption is that many physicians in both primary care and other specialties lack appropriate training experiences to prepare them for practice in ambulatory settings. Most graduate medical education takes place in hospitals, particularly in the large tertiary care centers that belong to the Council of Teaching Hospitals (COTH).[6] In 1986, nearly 80 percent of residents trained in the 329 COTH institutions; 46 percent trained in the 119 major COTH hospitals (Anderson et al. 1990).[7]

At the same time, diagnosis and treatment are increasingly being provided in outpatient settings. Illnesses treated in the hospital are now more complex and acute than in past, and more patients are admitted solely for specialized technical procedures. Lengths of stay are also declining, and as a result, residents have less time to think through a clinical plan or establish rapport with their patients (Wartman et al. 1990). In the past, for example, residents had a chance to get to know and to follow relatively healthy patients on a surgical service pre- and postoperatively. But in today's environment, the resident's first contact may be in the surgical suite with the patient being discharged the next day (Schroeder 1988).

While inpatient training remains a critical part of medical education, there is concern that residents have too few opportunities to learn about the bread-and-butter of ambulatory care, such as providing a continuum of care that includes health promotion and preventive medicine, management of chronic disease, decisions about when hospitalization is necessary, care for patients after discharge, and development of personal relationships with patients and their families. The technical skill, judgment and processes of medical decisionmaking required to provide these services are important to physicians in both primary care and subspecialty practice.

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[6] Teaching hospitals are those with one or more graduate medical education programs approved by the Accreditation Council on Graduate Medical Education or the American Osteopathic Association. COTH hospitals account for about one-quarter of nonfederal teaching hospitals and include academic medical centers.

[7] An increasing but still small number of residency programs include rotations in other sites such as clinics, health departments, blood banks, and health maintenance organizations.

Although many agree that more training should occur in ambulatory settings, the concentration of graduate medical education in hospitals is both an artifact of time and the result of financing mechanisms designed to meet the needs of traditional training sites. As described below, the financing of graduate medical education primarily through inpatient revenues has been a powerful barrier to changes in the site of training. In Medicare's early years, graduate medical education was funded like other hospital services on a retrospective, reasonable cost basis.

Financing of graduate medical education is provided predominately through inpatient revenues (both hospital payments and faculty physician fees) and a complex mix of federal and state government funds (Figure 11-5). The federal government is the largest single explicit financing source for graduate medical education through the Medicare program and through its support of residencies in Veterans Administration (VA) and Department of Defense hospitals.[8] Other payers have less explicit mechanisms for supporting graduate medical education. Teaching hospital charges to Blue Cross and commercial insurers reflect the direct costs of graduate medical education (for example, residents' stipends) although these payers do not identify and separately pay for them (COGME 1988). Most state Medicaid programs pay hospitals below cost and therefore provide little support for graduate medical education, even when their payment methodologies recognize direct costs.

With the adoption of prospective, per-case payment, new policies were needed to ensure equitable payment for teaching hospitals. The costs of graduate medical education are now recognized under two mechanisms: direct medical education payments and an indirect medical education adjustment. In fiscal year 1991, Medicare paid approximately $1.5 billion in direct medical education payments and $2.9 billion in indirect adjustments.

The direct costs of graduate medical education include residents' stipends, supervising faculty salaries, administrative expenses, and institutional overhead allocated to residency programs. While these costs were passed through even after the shift to prospective payment, the Consolidated Omnibus Budget Reconciliation Act of 1985 (COBRA) based payments for direct costs on hospital-specific per resident costs from the 1984 or 1985 cost-

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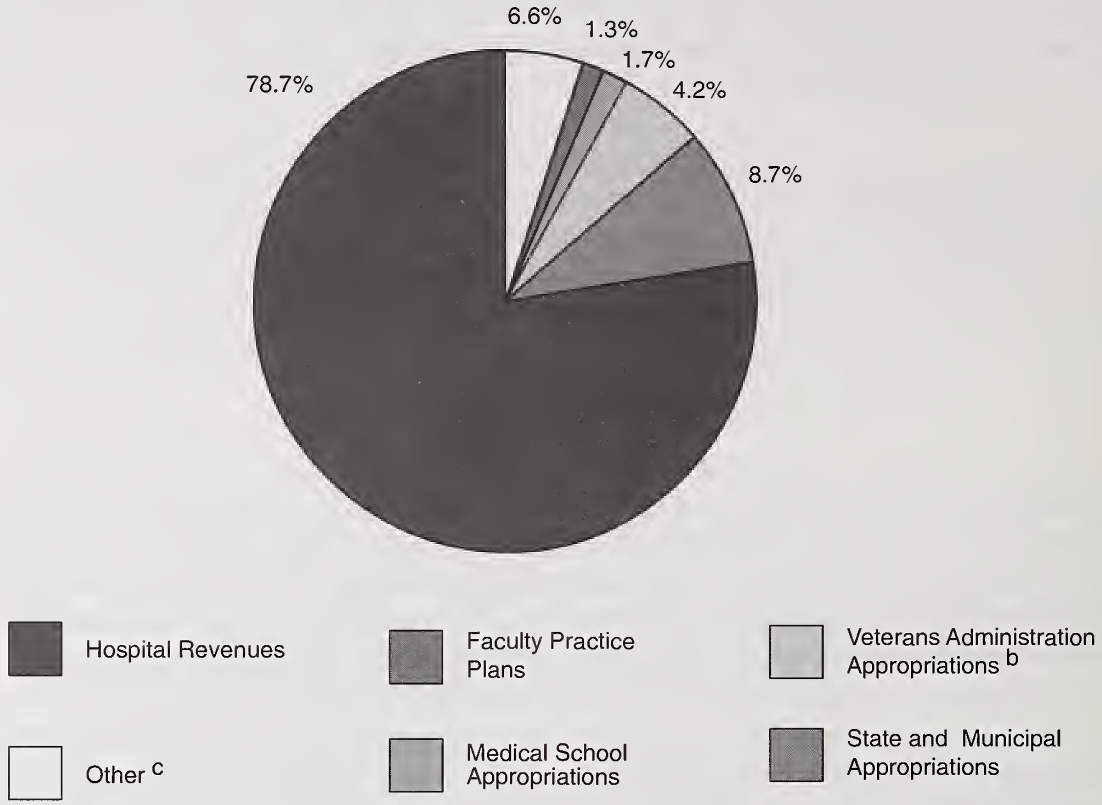
[8] The VA funds about 12 percent of residencies in fields other than obstetrics/gynecology and pediatrics. The federal government also provides Title VII support for selected primary care programs.

Figure 11-5. Sources of Financing for Resident Stipends and Benefits, 1991 [a]



Source: AAMC 1991.

Notes: [a] Excludes Veterans Administration (VA) Hospitals.

[b] This figure refers to financial support by the VA when VA hospital-based residents train at non-VA hospitals.

[c] Other includes endowment income, foundation grants and funds from other federal agencies, such as the National Institutes of Health.

reporting years, updated for inflation.[9] This base is multiplied by the number of full-time equivalent (FTE) interns and residents during the payment period. Residents beyond the period required for additional certification plus one year (not to exceed five years) are weighted as .5 FTEs.[10]

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[9] Final regulations implementing this section of COBRA were delayed until September 1989. As a result, some hospitals have not yet been paid under this method (Petersdorf 1992).

In addition to payment for direct costs, teaching hospitals also receive a hospital-specific percentage adjustment (based on the ratio of interns and residents per bed) to their total diagnosis-related group payments to compensate them for their relatively higher costs. These costs are not well understood. Further there is some ambiguity as to whether they are actually attributable to teaching, the involvement of residents in patient care, or the severity of illness of patients who require the specialized services available only in teaching hospitals. Some argue that teaching status is a poor proxy for factors such as severity of illness or concentration of new technology that currently cannot be measured accurately. On the other hand, the adjustment has been a criticalsource of revenue to teaching hospitals, particularly those that serve substantial low-income and uninsured populations.[11]

Considerably less financing is available for training in ambulatory settings. Under Medicare, the direct costs of residents' time spent in ambulatory sites and compensation for outpatient faculty are recognized only if the hospital "incurs all or substantially all" of the costs of training. This creates a disincentive for expanding training to group practices, nursing homes, and other nontraditional sites. Furthermore, even residency programs that seek to expand ambulatory training programs in hospital-owned sites face financial barriers because direct costs are based on 1984, rather than current, experience (Eisenberg 1989). Finally, Medicare will not pay for indirect costs in nonhospital sites. This may reflect the limits of applying a method based on resident-to-bed ratios to outpatient settings, lack of data to support the calculation of reasonable indirect costs for these settings, and other concerns about administrative feasibility (Friedman and Moskowitz 1991).

PAST POLICY EFFORTS

As a prelude to developing its own set of policy options to address the problems discussed above, the Commission looked to the experiences of the past three decades to see which efforts to affect growth in supply and to encourage training of primary care physicians had been considered, tested, found successful or abandoned. In the 1960s, concern about an impending physician shortage led federal and state governments to institute programs that were effective in increasing the total number of physicians. Later, in the 1970s and 1980s, predictions of an oversupply of physicians led to reducing general support for medical education and implementing federal, state and institutional policies to correct specialty and geographic maldistribution. The concerns motivating policymakers during these two eras and the specific programs enacted during each are described below.

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[10] Residents in accredited geriatrics training programs can be considered as 1.0 FTEs for an additional two years.

[11] There is a separate mechanism, the disproportionate share adjustment, that explicitly recognizes the additional costs associated with treating a population that is either publicly insured or uninsured.

Federal Policies of the 1960s

During the late 1950s and early 1960s, several major reports expressed concern that there was a shortage of physicians (Surgeon General's Consultant Group on Medical Education 1959; AAMC 1965; National Advisory Commission on Health Manpower 1967). Noting that physician supply was not keeping pace with population growth and increased demand for services, these reports called for direct federal assistance to medical schools as a means to increase regional physician-to-population ratios (Reinhardt 1990).

The Health Professions Educational Assistance Act (HPEAA) of 1963 provided the first substantial direct federal assistance to medical education by offering construction grants to health professions schools that agreed to increase enrollment, allocating specific dollar amounts per student (capitation grants) to the schools, and providing loans to students. Subsequent amendments to the HPEAA, including the 1968 Health Manpower Act, increased capitation grants and expanded loan and scholarship programs (Lee et al. 1976). These programs sought to boost overall physician supply, assuming that as supply increased, market forces would result in the diffusion of physicians to underserved areas (Rodos et al. 1990).

Residency programs also expanded rapidly during this period; the number of positions soon exceeded the number of U.S. medical graduates.[12] At the same time, immigration statutes were relaxed, allowing more international medical graduates (IMGs) to be trained in this country.[13] As a result, whereas IMGs accounted for one-quarter of all residents in 1965, they accounted for one-third of a larger number of residency positions by the early 1970s (AMA 1987).

These initiatives were effective in training more physicians. From 1965 to 1975, the number of medical schools increased from 89 to 114 and medical school enrollment grew by 70 percent. The number of graduates entering residencies also increased by about 70 percent, growing from 7,409 to 12,714 (AMA 1987). In fact, such efforts were so effective that, by the late 1970s, concern had shifted to the emerging physician surplus. This was solidified by publication of the GMENAC report in 1980.

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[12] The term "resident" is used throughout this chapter to refer to persons at all levels of graduate medical education, including fellows.

[13] International medical graduates were previously referred to as foreign medical graduates.

Federal Policies of the 1970s and 1980s

In the early 1970s, the policy focus shifted, fueled in part by a 1970 Carnegie Commission Report on Higher Education calling for a more equitable geographic and specialty distribution of physicians. Although the number of active physicians per 100,000 population grew by about 50 percent in the 20 years after the first major federal initiatives, the number of family and general practitioners per 100,000 population actually fell by 8 percent during this period (AMA 1987; Rodos et al. 1990). With growing awareness about such unresolved distributional problems and concern about overall supply, policies were also put in place to control immigration of IMGs. Capitation grants were targeted toward primary care specialties and then phased out, with funds directed into other mechanisms to boost primary care and rural health care.

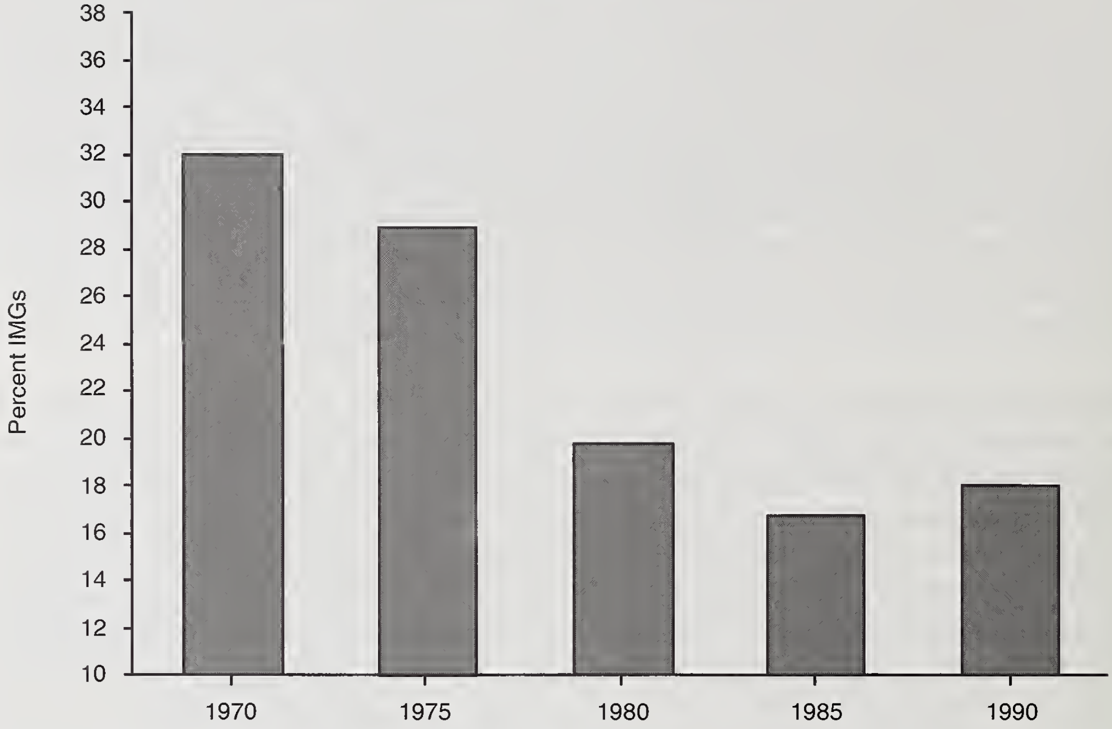
International Medical Graduates. The high proportion of IMGs in U.S. residency positions and concern about the impact of a continued flow of IMGs on aggregate physician supply prompted passage of stricter immigration laws in the mid-1970s. These efforts attempted to slow the number of IMGs entering U.S. programs and to ensure achievement of specific competency levels (AMA 1987). In 1976, more stringent competency requirements were mandated for IMGs wishing to train in the United States; conversion from exchange visitor to permanent residency status was made contingent on passing the Visa Qualifying Exam, a basic medical knowledge test (AMA 1987). Time limits were also placed on exchange visitor visas. And starting in 1978, IMGs were required to show competency in English.

These efforts slowed the flow of IMGs. From a high of 32 percent of residents in 1970, by 1985, IMGs accounted for only 16.8 percent of residents. Since then, the proportion of IMGs has increased slightly to 18 percent (Figure 11-6) (AMA 1990). U.S. citizens trained in medical schools abroad account for a shrinking proportion of the IMG population, dropping from about 40 percent of IMGs in 1980 to 34 percent in 1990 (Figure 11-7) (AMA 1987). IMGs continue to constitute a substantial percentage (26 percent) of primary care residents (Figure 11-8). This likely reflects hospitals seeking IMGs to fill unmatched residency slots to meet patient care needs.

The National Health Service Corps. The National Health Service Corps (NHSC) has been the primary federal vehicle for placement of physicians in underserved areas. Since 1970, more than 10,500 health care professionals (80 percent of them physicians) have served in one of 2,000 designated Health Professional Shortage Areas. At its peak in 1980, the NHSC funded more than 6,000 awards (GAO 1990).

During the early 1980s, the GMENAC report and concerns about the growing federal deficit renewed interest in the theory that primary care practitioners would eventually diffuse away from saturated markets and alleviate manpower shortages (Politzer et al. 1991). As a result, beginning in 1981, the NHSC was scaled back considerably. Due to the

Figure 11-6. International Medical Graduates (IMGs) as a Percentage of Total Residents, 1970-1990



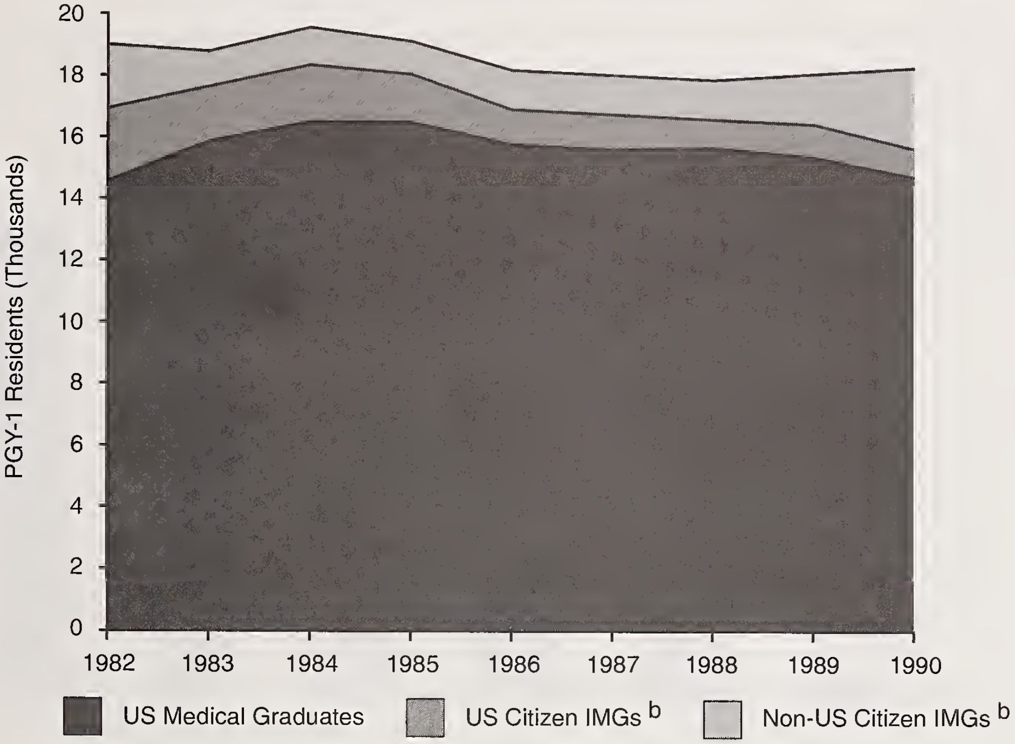
Source: JAMA Medical Education Issue, selected years.

Notes: Prior to 1990, international medical graduates (IMGs) were referred to as foreign medical graduates (FMGs).

long pipeline of scholars in the system, cuts were not felt until after 1986, when the NHSC field strength dropped precipitously (Rodos et al. 1990). In 1989, 215 scholars graduated (compared with 1600 in 1986). Only 41 new scholarships were awarded in 1990 (GAO 1990).

In response to the concerns of many rural hospitals and community and migrant health centers that could not attract staff physicians even under conditions of oversupply, Congress began revitalizing the Corps in the late 1980s by increasing funding substantially; in fiscal year 1992, the NHSC is funded at $100 million, up from less than $50 million in the mid-1980s but still significantly less than the $150 million it received at the beginning of the decade. In addition, two loan repayment programs were established. One of these programs, run by the NHSC, offers up to $35,000 per year toward a participant's loan obligation for

Figure 11-7. PGY-1 Positions By Nationality, 1982-1990 [a]



Source: Kletke 1991.

Notes: [a] PGY-1 refers to residents in their first post-graduate training year.

[b] IMGs refer to international medical graduates. Prior to 1990, IMGs were referred to as foreign medical graduates (FMGs).

each year of service.[14] In 1989, 112 health professionals signed repayment contracts. The other loan repayment program is similar, except it is administered and partially financed by states. Fourteen states have received matching funds for this purpose (GAO 1990).

Title VII. Under the original 1963 HPEAA, Title VII funds were directed at boosting enrollment in health professions schools. In the mid-1970s, this focus was narrowed to encouraging primary care, rural health, and improving representation of minorities in medicine (CRS 1990).

About 70 percent of primary care programs receive some Title VII funding through programs such as the Area Health Education Center (AHEC) Program (Section 781) and the Family

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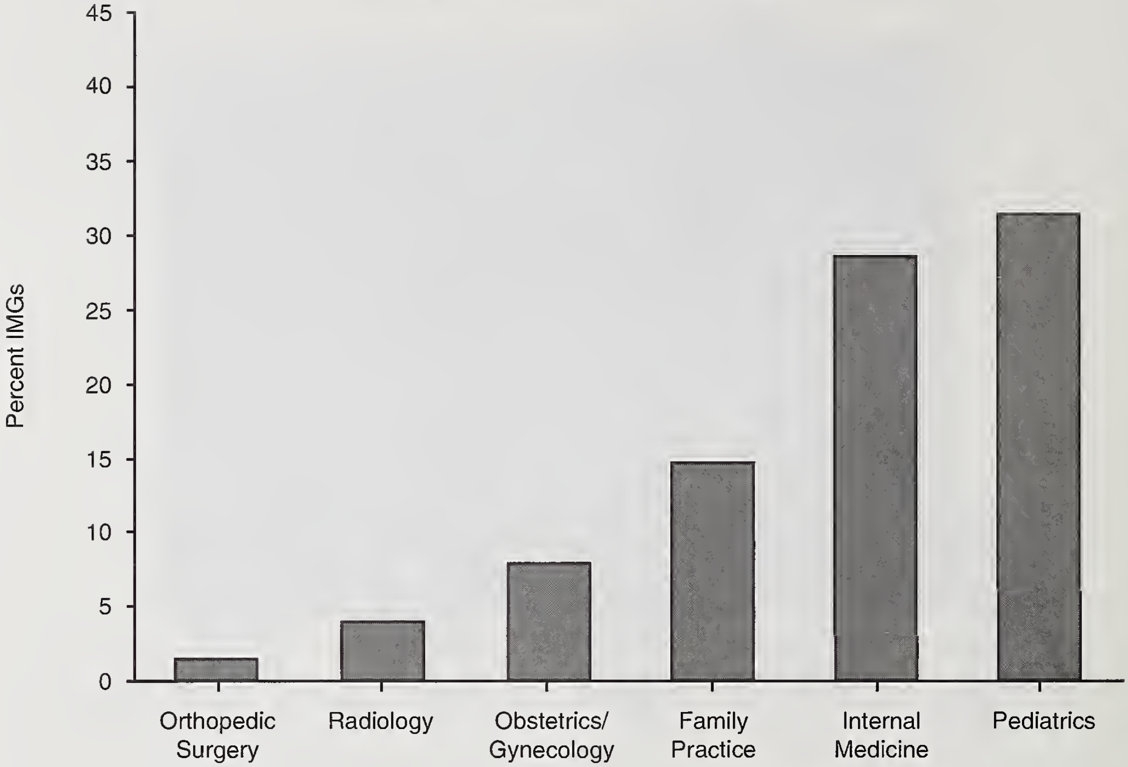
[14] There is a two-year minimum obligation and a four-year ($140,000) maximum.

Figure 11-8. International Medical Graduates (IMGs) as a Percentage of Residents, by Specialty, 1990



Source: Rowley and others, 1991.

Note: Prior to 1990, international medical graduates (IMGs) were referred to as foreign medical graduates (FMGs).

Medicine Authority (Section 786) (Amundson 1991). AHECs link academic medical centers with rural training sites and have been successful in encouraging graduates to pursue primary care careers in rural areas. Currently, 105 AHECs receive federal support (Fowkes et al. 1991). The Family Medicine Authority provides grants to medical schools and hospitals to develop and operate family practice training programs.

Student assistance in the form of loans, loan guarantees, and scholarships is also funded under Title VII. The largest financial aid program directed at health professions students is the Health Education Assistance Loan (HEAL) program, which allows students to borrow funds from commercial lenders while the federal government insures the loan's principal and interest. Borrowers pay a premium to the Student Loan Insurance Fund to support default and disability payments.

State Initiatives

States continue to provide substantial support for medical education (approximately $2.7 billion, or 14 percent of total medical school revenues in 1990) and have used this leverage to promote primary care and rural practice. Because 76 of the nation's 126 allopathic medical schools arepublic, state legislatures can be powerful mechanisms for change.[15] Efforts have included programs in 38 states to recruit practitioners to shortage areas via loan repayment/forgiveness programs and scholarships in return for service (OTA 1990). In addition, 42 states currently provide grants to support family practice programs in medical schools and teaching hospitals (Barnett and Midtling 1989).

States have also used public medical schools as laboratories for change and have developed a variety of educational reforms to encourage interest in primary care and practice in underserved areas. For example, because students from rural backgrounds are more likely than their urban counterparts to enter a primary care field and practice in underserved rural areas, some medical schools, including the University of Arkansas and the University of Missouri at Columbia, have adopted selective admission policies favoring students with strong rural ties. Others, most notably, the University of New Mexico and the University of Minnesota at both its Duluth and Minneapolis sites, have developed comprehensive curricula that emphasize primary care and rural medicine. Moreover, because the location of medical education appears to be an important determinant of eventual practice site, a few schools such as the University of Washington, through its WAMI program with sites in Washington, Alaska, Montana, and Idaho, and the University of Illinois have used rural rotations—some for as long as a year— to expose students to rural practice. Yet while evaluations of these approaches have been encouraging, such programs have reached only a small proportion of medical students.

OBSTACLES TO REFORM

From the experiences of the past 20 years, the Commission has concluded that despite some small successes, the larger goals of slowing growth in aggregate supply and shifting specialty distribution towards primary care have not been achieved. And while the need for more ambulatory training has been much discussed, residents continue to spend most of their time in inpatient settings.

Some past policies may have been ineffective because they were underfunded, because they had insufficient political support, or because the policy problems they were intended to address were no longer considered priorities. Yet it is the Commission's view that these efforts were also unsuccessful because they were undermined by other policies that created incentives for continued growth in residency positions, particularly in subspecialties. These policies include financing graduate medical education through the hospital as well as payment for physicians' services that overpaid surgical and technical procedures relative to evaluation and management services. The section below describes changes in the number and mix of residency positions and the fragmented process for creating, accrediting, and funding these positions that made such changes possible. It also considers the current imbalance between the service and educational components of graduate medical education and its impact on supply, specialty distribution, and the preparedness of physicians for practice outside the hospital.

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[15] Noting barriers to change within state medical schools, legislatures in Illinois, Minnesota, New Mexico, and Texas actually threatened to cut state appropriations unless the medical schools developed primary care/rural health programs (Spencer and D'Elia 1983; Verby 1989; Kaufman et al. 1989; Segal 1991).

Trends in Resident Supply and Specialty Mix

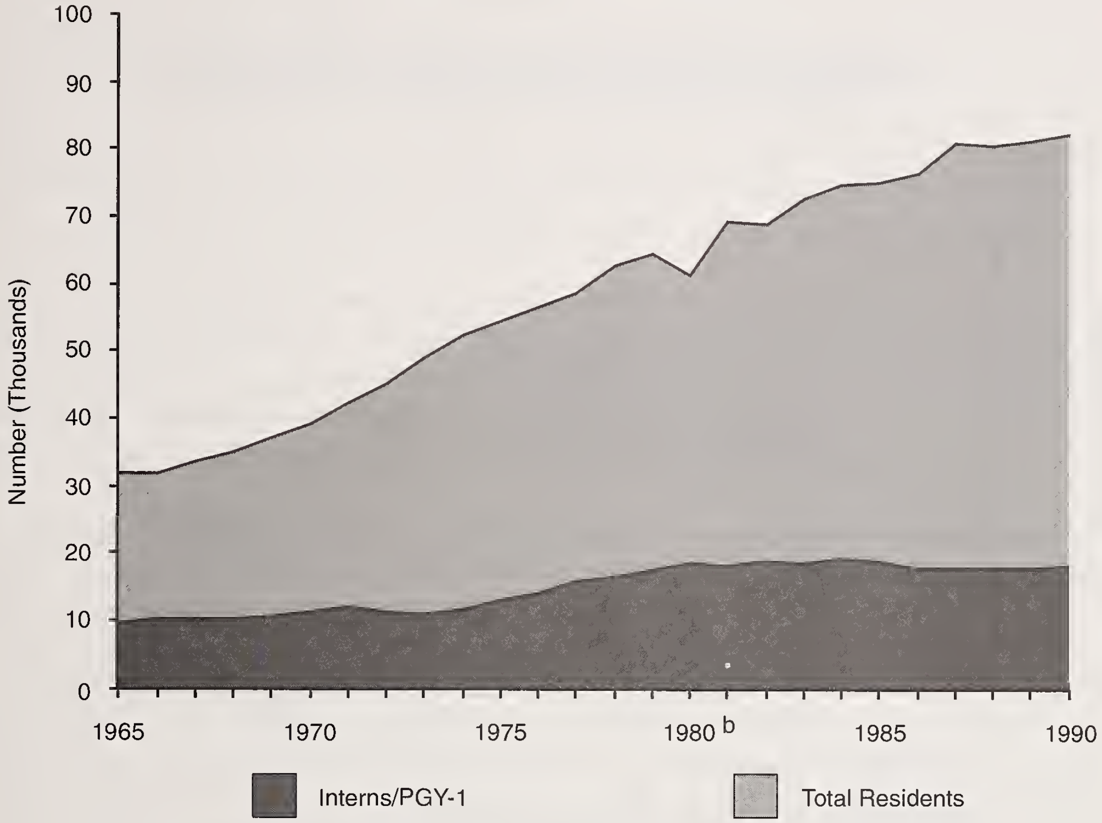
Currently, there are 6,664 accredited residency programs providing training to nearly 83,000 residents in approximately 66 different specialties (Rowley et al. 1991) The total number of residents has more than doubled since 1965, growing from 31,898 to 82,902 (Figure 11-9). This reflects in part the increased length of residency training in many specialties. Thus, the number of first-year residents has increased less rapidly than the total, although it has outpaced growth in thenumber of medical school graduates (Figure 11-10). As a result, there is a surplus of residencies compared with medical school graduates.

More recent data indicate that the share of residents in generalist fields is dropping while medical subspecialties are accounting for a larger proportion of residents. Since 1986, the number of residencies in cardiology, gastroenterology, and pulmonary disease have all more than doubled in contrast to a decline of 8 percent in family practice. Internal medicine and pediatrics had moderate growth rates of 3 percent and 5 percent, respectively. The number of positions in most surgical specialties has held even or dropped slightly.

Many attribute this growth to hospitals' demands for residents to staff specialized services (AAMC 1991a). For example, residencies may be created to ensure coverage of services that are labor-intensive, such as the neonatal intensive care unit. In public institutions, additional residents may be needed to accommodate an increasing volume of uninsured and underinsured patients.

Moreover, Medicare financing for direct medical education creates an incentive to employ residents instead of highly skilled nonphysician practitioners or salaried physicians who are fully trained. Residents are expected to work long hours for low salaries and can be paid from Medicare direct medical education payments. A nurse practitioner or physician assistant, by contrast, may be able to provide comparable service on a medical ward or in the operating room but commands a higher salary, works fewer hours, and does not

Figure 11-9. Trends in the Number of Interns/PGY-1 and Total Residents, 1965-1990 [a]



Sources: JAMA Medical Education Issues, selected years.

Notes: [a] Until the early 1970s, medical schoool graduates began their postgraduate training in straight or rotating internships, which could be either free-standing or associated with a residency program. From 1971 to 1975, free-standing internships were phased out and the first year of postgraduate training was incorporated into residency training. The term PGY-1 refers to residents in their first postgraduate year of training. It was first used in reporting 1980 data.

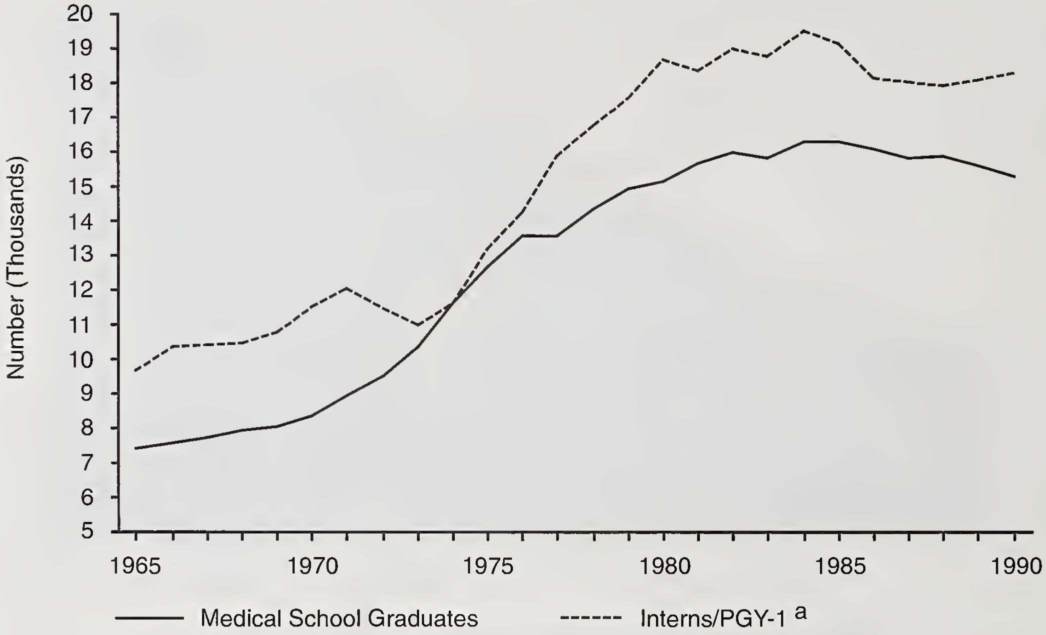
[b] Due to an unusually low response rate, the number of residents reported in 1980 was lower than in either 1979 or 1981.

generate additional Medicare payments. In some circumstances, faculty may prefer to work with nonphysician practitioners, who have lower turnover and more experience than residents. The availability of Medicare financing for residents, however, makes these arrangements less attractive to the institution.

The Organization of Graduate Medical Education

The growth in supply and changes in specialty distribution described above did not occur by deliberate or coordinated action. Because there is no single central body that plans, sets standards, or approves the total number and specialty distribution of residency positions, these trends are the de facto result of hundreds of decisions made by individual hospitals or

Figure 11-10. Trends in the Number of Medical School Graduates and Interns/PGY-1 Residents, 1965-1990 [a]



Sources: JAMA Medical Education Issues, selected years.

Notes: [a] Until the early 1970s, medical schoool graduates began their postgraduate training in straight or rotating internships, which could be either free-standing or associated with a residency program. From 1971 to 1975, free-standing internships were phased out and the first year of postgraduate training was incorporated into residency training. The term PGY-1 refers to residents in their first postgraduate year of training. It was first used in reporting 1980 data.

The dip in interns/PGY-1 between 1971 to 1976 reflects changes in counting as free-standing internships were phased out and integrated with residency training, and does not represent a true decrease in the number of postgraduate trainees.

Due to differences in counting methods, reported data on interns/PGY-1 for 1977-1979 were not usable: presented data reflect estimates.

medical schools affiliated with one or more hospitals to establish specific residency programs. They also reflect the decisions of accrediting and certifying bodies to approve those plans. Although the federal government funds a substantial proportion of graduate training, it does not have an active role in this process (Anderson et al. 1990).

General accreditation standards for all residency programs are set by the Accreditation Council for Graduate Medical Education (ACGME), a nongovernmental body sponsored by the American Board of Medical Specialties, the American Medical Association, the American Hospital Association, Association of American Medical Colleges, and the Council of Medical Specialty Societies.[16] Decisions about new programs, additional slots, and the quality of existing programs are made by 24 specialty-specific residency review committees (RRCs) within the ACGME; each consists of representatives of the AMA, the appropriate specialty board, and, in some cases, national specialty societies. The RRCs set standards related to clinical content, length, and appropriate service volumes for residency programs.

Traditionally, the RRCs have not considered the existing pool of residents in a given specialty when granting accreditation to new programs, noting that federal antitrust law prevents them from explicitly restricting supply. Such decisions could be made, however, if part of a process specifically authorized by the federal government. Decisions to raise quality standards that effectively limit supply can also be made without threat of antitrust action.

The lack of coordination among specialties in approving training programs means that there are effectively no limits on the number of potential residents. Hospitals that can meet RRC quality standards have considerable latitude to use residents both to develop new services and to keep other critical services staffed. Development of residencies in high-technology and procedural fields may be easiest because relatively high fees for faculty in procedural specialties enable these departments to generate clinical income to support additional residents. Some institutions, particularly large inner-city teaching hospitals, have become heavily dependent on residents as a cheap and highly skilled source of labor. Without residents, many of these hospitals could not continue to function as tertiary care centers or safety net providers for the uninsured (Gabow 1991).

These circumstances raise a number of questions. First, how are residents' educational experiences affected when hospitals create positions primarily to meet service needs? Even though learning by doing is the essence of the residency experience, some critics suggest that the balance between the residents' role as students and as providers of identifiable patient care services has tipped too far in favor of meeting service needs. Second, what happens to residents trained to provide intensive, high-technology services when they leave the hospital to practice in the community? Can they function efficiently and effectively in office-based practice?

Spiraling growth in the number of residencies frustrates efforts to constrain aggregate supply and shift specialty distribution toward primary care. At the same time, these residents are providing critical services to patients in teaching institutions. To ensure that residents have educational experiences that prepare them for ambulatory practice, successful reforms affecting supply and distribution must therefore include explicit mechanisms that accommodate these hospital service needs.

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[16] The federal government has a nonvoting representative on the ACGME.

WORK PLAN

In its initial work on physician supply, distribution, and graduate medical education, the Commission has identified several policy goals. First, in order to slow growth in aggregate supply and reach a more appropriate balance in specialty distribution, the number of residency positions, particularly in subspecialty fields must be reduced. Second, the residency experience should be reoriented to ensure that trainees are prepared to detect and treat disease as it presents in the population they will encounter in practice outside the hospital. The continued reliance of teaching hospitals' inpatient services on residents to meet clinical service needs is a major impediment to achieving these goals.

In the year ahead, the Commission will explore what it would take to overcome this obstacle. To develop options, it will draw on the expertise of medical educators, residency program directors, and administrators of teaching institutions. It will assess the factors motivating institutions to establish training programs, whether these factors vary across different types of teaching hospitals (for example, public versus private), and the implications of moving training to ambulatory sites.

The Commission also plans to consider options that would enable teaching institutions to continue meeting their essential service needs in a cost-effective manner. These include redefining the role residents play in delivering inpatient services and looking at the potential use of staff physicians. The supply and current roles of highly skilled nonphysician practitioners along with their potential as substitutes for residents will be explored as well. The Commission will also assess the appropriateness of using inpatient care revenues to finance graduate medical education and the implications of alternative financing models. In addition, it hopes to learn how other countries approach these issues to take advantage of any lessons from their experience.

The Commission also hopes to gain a better understanding about the impact of specialty distribution on expenditures for physicians' services. It will also consider whether differences in the cost of care rendered by specialists and generalists may be mitigated by changes in the content of training; broader dissemination of new information on appropriate care to practicing physicians, residents, and medical students through practice guidelines; practice profiling; and other mechanisms.

In its work, the Commission will keep the lines of communication open to the various federal agencies and major foundations active in this policy area, and hopes to draw on their expertise and insight.

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CHAPTER 12

MANAGING CARE: BEYOND THE RHETORIC

Managed care has been proposed regularly in recent years — by policymakers, group purchasers, health care providers, and the insurance industry — as a key part of the solution to the nation's health care ills. Newspapers, including the *New York Times* (1991a; 1991b), and other media have regularly touted its virtues. President Bush, in his proposed health reform program, points to managed care as offering "better incentives for appropriate, less costly, high-quality health care" (White House 1992). Numerous proposals before the Congress would create special incentives or preferences for managed-care arrangements. But perhaps the most unbridled enthusiasm comes from the insurance industry. According to one executive, "many of the present shortcomings of the U.S. health care delivery system can be largely overcome by adopting managed care, which increases the accountability of providers to patients and assures that resources are directed to cost-effective treatments" (Lynn 1991). The result is that managed care has become one of the standard buzzwords in health policy circles.

Despite all the rhetoric, managed care remains an elusive concept. It is a term used to describe many different approaches or arrangements that seek to improve quality and efficiency or to control costs. The first step in addressing managed care is to develop a clear description of the range of activities that currently fall under this rubric. This task includes categorizing the tools used in managing care and describing efforts in the public and private sectors to use these tools.

Rather than focus exclusively on the traditional institutional structures of managed care — health maintenance organizations (HMOs), preferred provider organizations (PPOs), and the like — this discussion concentrates first on the basic elements that constitute managed care — selecting providers and managing the care provided by them. But the question of who manages the care is important as well. Health care in the United States has moved a long way from the traditional model of management by physicians, with limited input from the patient or those paying the bills, to a variety of models where physicians and patients share significant management responsibilities with third-party payers or specialized managed-care organizations (such as HMOs). The critical questions are, first, whether the elements of management are effective and, second, whether that management is better performed within certain organizational structures or systems of delivering care.

Believing that much of what currently falls under the label of managed care is better described as the private regulation of health care and is focused on limited goals of containing costs, a number of experts have begun to ask how to push managed care toward a more extensive management role. These experts envision scenarios where physicians, patients, insurers, and managed-care organizations share accountability for improving outcomes of patient care and for meeting cost-containment objectives. Such an approach to management would not only look at the delivery of appropriate care for individual patients but also at such trends as the role of new technologies, the training of medical personnel, and the development of improved data and information-feedback systems.

As the nation enters into an election year in which health care is one of the leading issues for public debate, managed care is a central part of that debate. The Administration is advocating an increased role for managed care — under the new rubric of coordinated care — in both the Medicare and Medicaid programs. Meanwhile, various proposals for health system reform would give special recognition to managed care. In that context, the Commission believes that it is an opportune time to take a closer look at the role of managed care, both in the Medicare and Medicaid programs and in the broader health care system. Although the Commission is interested in specific questions of how payment reform will affect the use and expansion of managed care in both the public and private sectors, it believes that a more extensive look at the capacity of managed care as a mechanism for promoting cost-effective care is even more important.

This chapter concentrates primarily on the subject of managing care, rather than on the role of managed care in strategies for health system reform. The discussion does not focus much attention, for example, on what Enthoven (1988) has labeled "managed competition," which he defines as "the use of available tools to structure cost-conscious consumer choice among health plans in the pursuit of equity and efficiency in health care financing and delivery." Although Enthoven envisions closed-panel plans, such as HMOs, as critical to this competition, his main concern is how consumers choose among competing plans. Similarly, other health system reform plans that would structure the overall financing and organization of the system, including those that give a central role to managed care, provide context for this discussion but are not its central focus.

As the Commission addresses its new mandate of identifying those factors that promote cost-effective care, it is asking whether managed care or the individual elements of managing care have the potential to move beyond more limited cost-containment goals to broader goals of fostering the provision of cost-effective care. As the Commission looks beyond the role of financial incentives, the potential intersections between managed care and management tools such as practice guidelines and physician profiling, both ongoing interests of the Commission, make an understanding of managed care even more timely.

This chapter attempts to move beyond the rhetoric of managed care and to examine the essentials of managing care, whether that care is delivered in a solo practitioner's office on a fee-for-service basis, in a staff-model HMO, or in one of the newer hybrid forms introduced in recent years by various payers. In addition to reviewing the basic elements of managing care and the organizational forms included under this rubric, the chapter describes the substantial growth that has occurred over the past two decades and the federal role in that growth. The chapter concludes with an overview of the limited available research that seeks to identify the impact of managed care on cost containment and quality assurance. Although the Commission offers no recommendations in this chapter, it plans to continue its examination of these issues in the year ahead.

THE BIG PICTURE

For the world of managed care, it is a time of both substantial growth and considerable uncertainty, with the uncertainty extending even to the assessment of how quickly managed care is growing. The degree of penetration of managed care in the health system depends heavily on how managed care is defined. If the definition is broad enough to encompass any use of utilization management within traditional insurance arrangements, then managed care has grown explosively in recent years and has become nearly omnipresent. According to a 1990 survey conducted by the Health Insurance Association of America (HIAA), about 95 percent of those who obtain health insurance through their employer are now enrolled in some kind of managed-care plan, broadly defined, up from about 60 percent in 1987. But most of this growth is represented by the introduction of management features into traditional insurance plans. If managed care is defined more narrowly to incorporate only full-scale systems such as HMOs, then growth has been relatively flat and the degree of penetration remains modest. The HIAA survey sets the market share for HMOs at 20 percent in 1990, up from 16 percent in 1987. Using an intermediate definition that includes all plans that use some type of network of providers, managed care has risen from about 27 percent in 1987 to 38 percent in 1990 (Gabel et al. 1989; Sullivan and Rice 1991; Hoy et al. 1991).

Yet, while the numbers grow, uncertainty reigns in the managed-care world. On the one hand, those in the insurance industry continually point to managed care as the great hope for containing health costs while maintaining high-quality care. Many policymakers, both in the Congress and in the Administration, tout managed care with enthusiastic rhetoric.

Critics of managed-care arrangements, however, remain numerous and outspoken. Both consumers and physicians argue that their autonomy is limited by managed care. Consumers who choose some variants of managed care are told that they no longer have the freedom to choose any physician or hospital they wish or that certain procedures are unnecessary and thus not reimbursable. Physicians see their clinical decisions becoming the subject of constant review and oversight and are troubled as well by the prospect of losing control over their fees and seeing reductions in income. Those in the HMO industry respond, however, that a well-run HMO does not require the second-guessing or policing that physicians find objectional; instead, such organizations achieve accountability through their internal management structures and through an ethic of shared responsibility for the health of their members.

Other skeptics argue that managed care is often no more than "managed costs" or price discounting. In their view, many of the newer HMOs or PPOs enter the market and negotiate discounted prices with providers who seek the guaranteed volume of patients that these organizations claim to be able to offer. Any cost savings they may be able to achieve, according to this view, are nothing more than lower prices. Little, if anything, is done to reduce the utilization of services or to manage the delivery of care.

In the public sector, serious questions abound. Advocates point to growing enrollment in managed-care arrangements under both Medicare and Medicaid and argue that enrollees receive better care than under fee-for-service medicine. Yet a few of the public-sector plans have been found to be poorly managed. Furthermore, some critics contend that, beyond the identification of a few "bad apples," quality assurance is generally inadequate and financial incentives encourage underservice. While acknowledging that managed care per se is not a bad thing, they argue that it may not always be appropriate for those populations for which government has assumed responsibility — especially those who are sicker or less educated in the skills of dealing with bureaucratic organizations.

If the broad goals of managed care are containing costs and maintaining quality, the key question is how well these goals are being met. Although the more tightly managed variants have a strong reputation in this regard, solid evidence for managed care in general is lacking for the most part. To date, the insurance industry has provided only anecdotal evidence of substantial savings. Furthermore, systematic studies of managed care or utilization management have found only limited evidence of the effectiveness of various management techniques.

To some, managed care is the "magic bullet" that will contain costs and improve quality of care. But to others, the promise is illusory. In the words of Robert Berenson, a practicing physician who co-founded the National Capitol PPO and remains its co-medical director, "Unfortunately, the promise of managed care has not been realized. Instead, we have witnessed the development of marginally effective, follow-the-leader, regulatory-type interventions that are concerned more with restricting benefits and hassling providers than developing cost-effective programs" (Berenson 1991).

The absence of a consistent definition for the term "managed care" has been one of the obstacles to sorting through the rhetoric, since managed care is used in a variety of contexts to mean many different things. On the one hand, managed care is used to refer to the care provided to a particular individual. In this regard, the term "case management" has come to be used more in the context of the care of specific individuals with especially complex or costly illnesses or conditions. By contrast, the term managed care is most frequently applied to a system with utilization review and cost-containment features, one ultimately designed to ensure that care is provided in the most cost-effective manner. Yet the term is also applied to individual management features, whether employed in such systems or independently.

Different segments of the managed-care industry have debated the meaning of the term managed care at great length. They agree that the integration of financing and delivery of health care services is a defining element and, more generally, that managed care must include provider networks and an enhanced role for primary care. But they are in less agreement on more specific characteristics.

The Health Insurance Association of America, which represents traditional insurers, identifies four elements it considers common to managed-care plans: (1) arrangements with selected providers to furnish a comprehensive set of services; (2) explicit standards for selecting providers; (3) formal programs for ongoing quality assurance and utilization review, including case management and the use of primary care gatekeepers; and (4) significant financial incentives for members to use the plan's providers (HIAA 1990).

The Group Health Association of America (GHAA), the trade association that represents HMOs, agrees that these are important features (although questioning whether many of the newer managed-care organizations include them) but notes that managed care as practiced by HMOs is also characterized by capitated payment and provider risk sharing. Its backers have also observed that it is misleading to define managed care simply in terms of such features as a second surgical opinion program or a contract with a provider network or utilization control agency. Rather, they point to the idea that HMOs integrate financing and delivery by organizing physicians and other providers to ensure that their enrolled members receive all medically necessary care (Doherty 1991; Gold 1991a; Gold 1991b).

In the end the different segments of the industry are arguing more about whether their particular models are effective at managing care than about the specific words that belong in a definition. In fact, Gold (1991b) observes that policymakers would be better served if the term were dropped in favor of an emphasis on which elements of managed care are present in different organizations and which ones work.

Yet the term managed care remains a source of frustration to analysts and policymakers who hear all things promised in its name, and to physicians, who see themselves — more often than the care — as the subject of the managing. An editorial in a recent issue of *Modern Healthcare* (Bell 1991) echoed a sentiment heard increasingly in the health policy arena, arguing that "a name change could help the managed-care industry repair its tarnished image as a cut-rate purveyor of medical services." Following the lead of the federal government, it suggests adoption of the name "coordinated care," describing that term as a "kinder, gentler name for managed care," one that "conjures visions of communication, teamwork and dialog among the participants in the delicate healthcare ecosystem." Although the idea of a name change has much merit, this chapter maintains the more traditional terminology. The ultimate question is whether the name change is purely one of semantics or a broader change in emphasis.

THE ELEMENTS OF MANAGING CARE

Whether the terminology of managed care or coordinated care or some other term is adopted, it is critical to understand the elements that are central to the managing of care, wherever it is provided or however it is paid. As a general rule, managing care may be accomplished by one or more of three general approaches:

- selecting providers,
- restricting clinical choices, and
- inducing changes on the part of providers.

Although these options represent the basic elements of managing care, an equally important issue is who manages the care. Traditionally, care was managed jointly by the physician and the patient. The patient chose his or her physician and may have participated in selecting specialists and hospitals, but deferred to the physician most of the time on clinical choices. Today, others have assumed much of the management responsibility. In some cases, third-party payers — including employers, insurers, and government — may assume this role, making the argument that they need to manage their expenditures. For others, management may come from organizations such as HMOs and PPOs. In the tightly organized world of staff-model HMOs, physicians and nonphysician managers may work as partners in sharing responsibility and accountability for the care of HMO members. In the looser arrangements developed by some employers and insurers, the management approaches range from limited use of utilization management to selecting the providers for a network and attempting to influence and restrict the clinical choices made by those same providers and their patients.

The limits imposed under most managed-care arrangements affect the consumer as well as the provider. Under traditional arrangements, patients usually delegated many choices to their physicians. By contrast, managed care generally asks consumers to surrender some freedom of choice to the managers of care. This limitation varies considerably, so that tightly managed organizations may strictly limit the choice of provider and the availability of some treatment options, while more loosely managed options may allow more choices but impose financial costs on some of the choices. In return for relinquishing some freedom of choice, consumers are promised that costs will be contained without diminishing quality of care.

Selecting Providers

Totally unrestricted freedom of choice in selecting providers is fast becoming a thing of the past or, at the least, becoming a privilege that comes with a price. More and more, the consumer is offered some form of panel or network of providers when entering the health care system and is required to seek care from only those providers or is offered strong financial incentives to stay within the network.

At one extreme, the selection of providers is accomplished on grounds that provide little, if any, guarantee of quality care — availability or willingness to join the network, general reputation, or geographic location. Some managed-care organizations have entered the marketplace by contracting with virtually any physician willing to accept discounted payments in exchange for the possibility of additional patients. Some such organizations are simply trying to enlist enough physicians and hospitals to be credible with potential enrollees, while others may seek to expand their networks to include every available physician.

Some organizations, on the other hand, may go a step further and attempt to establish criteria for including providers in their networks. Some, for example, have enrolled only those physicians who are board-certified in their specialties. This criterion is, however, an inexact measure and may exclude some young physicians who have not yet completed the certification process or older physicians who trained before board requirements were widely used.

Insurers, in building provider networks, may contract with individual providers, or they may rent or purchase an existing network. Three of the largest insurers — Metropolitan, Prudential, and CIGNA — reportedly spent more than $200 million on creating nationwide network-based managed-care plans over the past years (Miller and Luft 1991). Smaller insurers may pool together to build networks in certain geographic areas. In general, the strategy of renting or purchasing a network is much easier to pursue than building a network from the ground up (Hoy et al. 1991).

Many observers believe that it is time to move toward more rigorous grounds for selecting the best providers. Tools such as profiling practice patterns and researching patient outcomes offer the potential for rigorous, data-based criteria for selecting and retaining physicians.[1] Yet few managed-care organizations appear to base their contracts with physicians on performance, and even fewer look at claims data and profiles in making selection or termination decisions.

There is some evidence that insurers are moving toward selecting networks of providers more rigorously. Insurers labeled by Hoy, Curtis, and Rice (1991) as trend-setting managed-care insurers (those with a broad range of managed-care experience and a significant proportion of their group business under such arrangements) have more tightly drawn networks. They have more enrollees per physician and are far more likely to have refused to renew a provider's contract or have terminated a contract with a PPO.

On the hospital side, the use of rigorous standards appears somewhat more common. In a review of innovative uses of managed care by 15 major corporations, geographic locale remains a key consideration since it is important that employees have convenient access to a selected hospital. But other criteria are considered as well: mortality, morbidity, and infection rates; rates of accidents and iatrogenic diseases; employee attitudes about and utilization of different hospitals; and opinions of local medical societies on hospital quality (Gray 1991).

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[1] See Chapter 9 for a fuller discussion of the role of physician profiling in medicine.

The same corporations find it considerably more difficult to put together a physician network, with the leading criteria including numerical sufficiency, hospital affiliation, and geographic distribution. Companies look, for example, for the availability of one primary care physician per every 250 eligible employees and seek to include within that panel 50 percent internists, family practitioners, or general practitioners; 25 percent obstetricians or gynecologists; and 25 percent pediatricians. Geographic distribution is also considered; as one corporate benefits officer observed, "you want about 40 percent of the doctors and hospitals in a given city" (Gray 1991).

One variation on the theme of selecting providers comes in the efforts of certain payers to channel specialty care — particularly for less common procedures — to a very small number of providers. This selective contracting is based on the theory that, for many services, higher volume is associated with higher quality and that costs are lower in such an environment. Payers select centers of excellence based on a rigorous set of standards. General Electric, for example, uses such centers for certain treatments; it pays not only the medical costs but also transportation expenses, meals, and lodging for the patient and one family member (Darling 1991).[2] Medicare has also experimented with this approach for patients in need of coronary artery bypass grafts (CABGs) or transplants.

Restricting Clinical Choices

Once the group, staff, or network is in place, the next concern is how to influence the patterns of practice of those providers. The most direct approach is to limit directly the choices that providers can make in treating their patients. The strategy is also crucial for health plans that do not restrict patients to a limited network of providers.

Most commonly, this strategy takes the form of review before or after a course of treatment or an admission and, if the procedure or course of care is deemed inappropriate, denial of payment. Utilization management was defined by the Institute of Medicine's Committee on Utilization Management by Third Parties as "a set of techniques used by or on behalf of purchasers of health care benefits to manage health care costs by influencing patient care decision-making through case-by-case assessments of the appropriateness of care" (Gray and Field 1989).

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[2] Employers have been particularly interested in specialized networks for mental health and chemical dependency services (England and Vaccaro 1991).

The utilization management strategy with the longest history is retrospective review, together with denial of claims. Whereas these techniques are important for cost containment and quality review, they provide little opportunity for management or restriction of clinical choices, except perhaps for a sentinel effect.

The dominant utilization management strategy is prior review of medical services, which incorporates the evaluation in advance of whether services proposed for a specific person conform to the provisions of health plans that limit coverage to medically necessary care (Gray and Field 1989). These techniques include preadmission review for elective hospital admissions, admission review (occurring 24 to 72 hours after hospitalization), continued-stay review or concurrent review, discharge planning, and second opinion. All of these techniques are designed to review on a timely basis the clinical choices being made by physicians and hospitals and to restrict the choices that those providers may make. (Of course, patients also retain the option of proceeding with a course of treatment by paying out of pocket; under some organizational structures, reimbursement may be permitted with a financial penalty.) According to a survey on managed care conducted by HIAA in 1990, techniques such as precertification, concurrent review, and discharge planning are virtually universal in PPOs, whereas they are used in only about two-thirds of insurers' conventional group health business (Hoy et al. 1991).

Prior review techniques are fairly blunt tools for influencing clinical decisions, although preferable in most eyes to retrospective review. But they are also among the few tools available to traditional payers with no contractual arrangements with providers. Berenson (1991) labels this a regulatory approach to management and calls it the equivalent of the Internal Revenue Service auditing every tax return. He goes on to argue that managed-care organizations "have the ability to audit more efficiently than the tedious, case-by-case approach which distant payers must use."

Whereas utilization management approaches focus on specific clinical decisions, other levers for restricting clinical choices focus on limiting the use of specialists or specialty services. The principal mechanism for accomplishing this end is the use of primary care physicians as gatekeepers. Under one form, all patients select a primary care physician from an approved panel, and all use of specialty services must be on referral from that physician. In this way, patients cannot refer themselves to unneeded specialty care and, at least in theory, care is provided in the most appropriate and cost-effective manner.

The gatekeeper system still meets with much resistance on the part of both patients and physicians, neither group liking this constriction on their autonomy. This system may at times be used in a mechanistic fashion, so that, instead of creating a positive relationship between patients and their primary care physicians, gatekeepers may serve a rationing function, transforming the doctor-patient relationship into an adversarial one. For the system to work optimally, gatekeepers must be able to deliver a broad range of primary care services and to know when and where to refer patients for more specialized care (as well as how to coordinate specialty care on an ongoing basis, when appropriate).[3] Some observers believe that, to use gatekeepers to their full potential, managed-care organizations should directly evaluate the ability of gatekeepers to perform these functions (Berenson 1991).

Inducing Changes on the Part of Providers

Whereas restricting clinical choices through techniques such as utilization management has a heavily regulatory flavor, the approach of inducing changes on the part of providers is truer to the idea of management. As stated by one insurance executive in testimony before the Senate Committee on Finance, "The real potential for savings lies in achieving lasting change in behavior through contractual relations established with a limited number of quality physicians" (O'Brien 1991).

Traditionally, influencing the behavior of physicians was limited to an appeal to professional standards while preserving the individual practitioner's clinical autonomy. For certain types of patients such as those generating unusually high costs, payers might ask that individual case-management services be used to monitor and direct the care.[4] More generally, the development of practice guidelines has the potential to transform the process of influencing physician behavior into something less amorphous. Even within a relatively unstructured practice environment, physicians can be encouraged — with or without some form of enforcement — to comply with guidelines.[5]

The managers of care can take this process a step further and use tools such as profiling or outcomes research to monitor the provision of care or, more specifically, compliance with guidelines. Managers can then institute a feedback process to educate providers and influence them to bring their practice in line with established standards. The HIAA managed-care survey reports that insurers representing 96 percent of the PPO market maintain some form of physician profiles. Some may, however, use profiling only to identify outliers, a use that tends to represent a regulatory perspective. In general, the so-called trend-setting insurers use profiling and feedback far more extensively (for example, to consider patterns of care rather than to identify outliers) both to support quality assurance and to encourage physicians to modify practice patterns (Hoy et al. 1991).[6]

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[3] A number of physician groups (e.g., mental health professionals, pediatricians, and dermatologists) have raised questions about the ability of gatekeepers to make appropriate referrals for services.

[4] For example, many employers try to identify patients with such characteristics as multiple hospital admissions, large annual claims expenses, or use of high-technology procedures. Care for such patients is then managed on an individual basis.

[5] See Chapter 8 for a fuller discussion of the role of practice guidelines in medicine.

Still, the effectiveness of these approaches to changing provider behavior varies as much as the organizational forms in which providers operate. In a group practice prepayment plan, there may be a strong culture that encourages physicians and nonphysician managers to share responsibility for effectively managing care within limits. Here, there is a strong joint commitment to the success of the organization. Less reliance is placed on individual financial or other incentives to achieve managed-care objectives. In other organizational environments, physicians may be responsible to a single manager, one with some form of hiring and firing power. This relationship may influence their level of commitment toward the overall success of the organization, and there may have to be greater reliance on individual physician incentives.

In still other arrangements, physicians may be part of several different networks, each having different managers who have different standards and priorities and who have less of a hold (financial or otherwise) on the individual practitioner. In this situation, physicians are potentially much less susceptible to being influenced by any one organization to change practice patterns. Heavy reliance may be placed here on oversight of individual practices and the use of financial inducements or penalties to achieve objectives.

The use of physician profiling, in particular, is limited when the manager of care controls a relatively small proportion of the physician's business. Thus, for example, insurer-sponsored HMOs had an average of 60 enrollees per physician and HMOs based on the independent practice association (IPA) model averaged 25 per physician; comparable averages for group-model and staff-model HMOs were 198 and 312, respectively. The existence of large local market shares can be critical, not only for negotiating price discounts but also for using profiling effectively to influence physician behavior (Miller and Luft 1991).[7]

The levers for inducing change are not, however, limited to persuasion. Economic incentives and regulatory standards may be used as well to convince providers to practice medicine in a cost-effective manner. In some cases, physicians may receive incentive payments based on the utilization or hospitalization rates of their patients. One form of incentive is the so-called withhold account, where the managed-care organization withholds a fraction of the payment due to a primary care physician until the status of the funds used to pay for specialists, hospitals, and outpatient laboratory testing is determined at the end of the year. If there is a deficit, the withheld money is not paid. Other organizations pay a bonus if physicians meet some standard of productivity (Hillman et al. 1991). In other settings, physicians may be compensated on a full or partial capitation basis, so that they are at risk for the incurred health costs of their patients.[8]

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[6] Two examples of managed-care organizations that are making extensive use of profiling are the United HealthCare Corporation (Leatherman et al. 1991) and US Healthcare (Schlackman 1991).

[7] Miller and Luft (1991) note that, even for one very large California carrier, the mean number of specific procedures (e.g., cholecystectomy and hernia repair) per physician was less than two, making meaningful profiling difficult.

The HIAA managed-care survey revealed that most insurer-sponsored HMOs (78 percent) use fee schedules to pay their primary care physicians, whereas most PPOs (81 percent) used discounted charges. For specialists, however, HMOs are split between use of discounted charges, fee schedules, and capitation. In general, the trend-setting insurers are more likely to use capitation for both their primary care physicians and their specialists (Hoy et al. 1991). A survey of all HMOs by InterStudy (Porter et al. 1992), a firm that conducts regular censuses of HMOs, shows that capitation (72 percent) is the most common payment method for primary care physicians overall, trailed by discounted fee-for-service (42 percent), negotiated fee schedules (33 percent), fee-for-service (24 percent), relative value scale (16 percent), and salary (14 percent).[9] A survey of HMO managers conducted in 1989 showed that about three in five use some form of withhold account and most withheld from 10 percent to 20 percent of physicians' incomes. Most of the managers believed that withholding in this range was likely to have a noticeable effect on the ordering behavior of individual physicians in the areas of discretionary outpatient lab tests, specialist referrals, or elective hospitalizations (Hillman et al. 1991).

Economic incentives have a serious downside, however. Many observers have raised the fear that, by providing a flat payment per patient, payers offer physicians an incentive to provide less care than may be medically necessary. As Berenson (1991) comments, "An HMO takes the same physicians who it thinks abuse fee-for-service incentives and trusts them not to underserve their capitated patients while giving them direct incentives to do just that." Surveyed HMO managers indicated that withholds at levels exceeding 30 percent could raise questions about the appropriateness of physicians' judgments (Hillman et al. 1991).

The latest trend in the search for ways to induce change from providers is the kind of overall management that comes under rubrics such as total quality management or continuous quality improvement. Popularized by Donald Berwick (1989) and his colleagues at the Harvard Community Health Plan, total quality management is a strategy from other industries that calls for a close examination of the components of providing health care for flaws that can be corrected and a continuous monitoring of the process to determine when further changes are needed (Burda 1991). The managers of such plans employ a combination of other strategies — profiling, outcomes, guidelines, and economic incentives — and emphasize feedback of findings to individuals as well as a corporate culture that emphasizes quality. Although the total quality management approach seems to fit most naturally within the closed environment of an HMO or hospital, some corporations — including Honeywell, AT&T, and Xerox — have adopted variations of this approach in their purchasing of health care services.

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[8] In practice, the effectiveness of capitation is limited by the influence of adverse selection, whereby the mix of patients is often a better predictor of total costs than the decisions made by the provider.

[9] Gold (1991b) reports similar results, with 56 percent of HMOs using capitation as the predominant method, followed by fee-for-service (28 percent) and salary (15 percent).

THE ALPHABET SOUP OF MANAGED CARE: HMOs, IPAs, PPOs, EPOs, POS

As noted earlier, managed care can refer to both the elements of managing care and the institutional structures within which care is managed. To some, managed care means the process of managing, whether using the simpler tools of utilization management or the more sophisticated techniques of continuous quality improvement. To others, the term is equated with alternative delivery systems that are variously known by such names as HMOs, PPOs, IPAs, or exclusive provider organizations (EPOs) (Table 12-1).

In contrast to traditional indemnity insurance plans where the insurer simply reimburses the insured individual for incurred health expenses and has no direct relationship with the providers of care (or even to service plans like Blue Cross and Blue Shield, which may pay providers directly), alternative delivery systems create a direct relationship between the insurer and the provider of care. Whether physicians are salaried employees or contractors, they have a relationship with the HMO or PPO wherein they give up some clinical and financial autonomy to that organization. The consumer who joins a managed-care organization also surrenders some freedom of choice inmaking that decision. The HMO or PPO in turn takes on a managerial role with the hope of containing costs and enhancing quality of care.

Still, the organizational forms that fit under the rubric of managed care are becoming increasingly difficult to distinguish. One study of the Minneapolis-St. Paul market concluded that "the clear-cut distinction between fee-for-service health insurance plans and health maintenance organizations has become a thing of the past. It is no longer useful in describing the Minneapolis health plan market" (Feldman et al. 1989). Researcher Harold S. Luft (1988) has made the case more generally that "PPOs, with their incentives for patients to choose from a limited set of providers, are looking increasingly like HMOs of the [IPA] variety. By the same token, some HMOs are instituting copayments, which are making them look increasingly like FFS [fee-for-service] insurers...." Luft, like a number of other analysts, concluded that the strict distinctions between the fee-for-service sector and managed care and among forms of managed care are being replaced by a "spectrum of systems with overlapping characteristics." Rarely now do any third-party payers reimburse providers for all bills at whatever amounts are requested. Although an understanding of the current

Table 12-1. Forms of Managed Care

Health Maintenance Organization (HMO) -- A prepaid, organized health care plan. Individuals are enrolled in the plan, and services are provided through a system of affiliated providers. Comprehensive benefits are financed by prepaid premiums with limited copayments.

Staff-Model HMO -- Physicians practice solely as employees of the HMO and are usually paid a salary.

Group-Model HMO -- The HMO pays a physician medical group a negotiated, per capita rate, which the group in turn distributes among individual physicians.

Network-Model HMO -- The HMO contracts with two or more independent (single- or multispecialty) group practices to provide services and pays a fixed monthly fee per enrollee. The group decides how fees will be distributed to individual physicians.

Independent Practice Association (IPA) -- The HMO contracts with individual physicians in independent practice or with associations of independent physicians to provide services at a negotiated rate per capita, flat retainer, or negotiated fee-for-service rate to the HMO members. Physicians maintain their own offices and see patients on a fee-for-service basis, while contracting with one or more HMOs.

Preferred Provider Organization (PPO) -- A financing and delivery system with features of fee-for-service and HMOs. The PPO contracts with networks or panels of providers who agree to provide services and be paid on a negotiated fee schedule. Enrollees are offered a discount if they see doctors on the preferred list, which is generally drawn by either insurance companies or employers.

Exclusive Provider Organization (EPO) -- A variation on the PPO model, it differs from the PPO in restricting enrollees to the panel of preferred providers. Services rendered by nonaffiliated providers are not reimbursed. In some ways, EPOs are more like HMOs, but with greater flexibility in benefit design and pricing structure.

Point-of-Service (POS) plan -- A hybrid model that combines features of both prepaid and indemnity insurance. Enrollees decide whether to use a network or non-network provider at the time care is needed but are usually charged sizable copayments for selecting the latter. Variants include open-ended HMOs, which are sponsored by HMOs but which allow members to refer themselves to outside providers, and triple-option plans, in which enrollees have the option of using either HMO, PPO, or indemnity benefits.

organizational forms of managed care remains important, it may be necessary in the future to develop new definitions and new typologies to describe the evolving world of managed care.[10]

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[10] A similar argument is made by Miller and Luft (1991). Welch, Hillman, and Pauly (1990) go a step further and present several alternative typologies. They suggest that HMOs can be distinguished by five characteristics: (1) method of payment to primary care physicians; (2) whether physicians see patients covered by traditional fee-for-service insurance; (3) nature of the HMO's financial contract with its middle tier (such as a medical group), if any; (4) nature of the risk or reward to primary care physicians; and (5) size and nature of the risk pool used to share the risk or reward.

HMOs, PPOs, and Related Models

The origins of managed care and alternative delivery systems trace back to early traditions of company doctors and to some of the early group practices, such as the Mayo Clinic. Among the direct precursors of modern-day HMOs are four that began as prepaid group practices and have made the transformation into modern-day HMOs: Group Health Association (GHA), Group Health Cooperative (GHC) of Puget Sound, Kaiser Permanente, and the Health Insurance Plan (HIP) of New York.

The earliest staff-model group practices grew out of the active labor movements of the 1930s and 1940s. GHA was organized in Washington, D.C., in 1937 as a nonprofit cooperative by employees of the Federal Home Loan Bank, whereas GHC was put together at the end of World War II by members of the Grange, the Aero-Mechanics Union, and local supply and food cooperatives (Starr 1982). Both GHA and GHC operate today as staff-model HMOs, with the physicians employed directly by the HMO. GHC is now one of the largest staff-model HMOs in the country with 414,000 members, and GHA has 150,000 members. Today staff-model HMOs may come under different forms of sponsorship. Harvard Community Health Plan, the largest with 507,000 members, is a private not-for-profit company, whereas the CIGNA Health Plan of California (based in Glendale), with 288,000 members, is owned by the CIGNA Insurance Company (Porter et al. 1992).[11]

Group-model HMOs, such as Kaiser Permanente, had their origins more on the management side of the business equation. They differ from staff-model HMOs in that the physicians are organized as a group separate from the HMO, which in turn contracts with the group as a whole. Thus, in each of 12 geographically dispersed regions, the Kaiser Foundation Health Plan contracts with a Permanente Medical Group, rather than hiring physicians directly. The Health Plan and the Medical Group assume equal responsibility for organizing and providing health care and are both accountable for success or failure. Kaiser Permanente was an outgrowth of medical services that Henry J. Kaiser arranged for his employees; the organizations were opened to the public in 1945. HIP, on the other hand, was created in 1947 at the instigation of New York Mayor Fiorello LaGuardia to provide medical services for city employees.

Like GHA and GHC, Kaiser and HIP faced serious opposition from organized medicine, which saw threats in any form of group practice, especially those controlled by nonphysicians. But these pioneers in managed care won some court battles and gradually gained acceptance. The American Medical Association, acting in 1959 to adopt the recommendation of its Commission on Medical Care Plans, chaired by Dr. Leonard Larson, abandoned its strict opposition to closed-panel group practices, enhancing the ability of such plans to prosper.

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[11] The CIGNA Health Plan of California was founded as the Ross-Loos Clinic in 1929.

By the mid-1950s, both Kaiser and HIP had roughly a half million members (Starr 1982). And today they remain the largest group-model HMOs in the country. Kaiser's regional units actually represent five of the 25 largest: Kaiser, Northern California (1st), Kaiser, Southern California (2nd), Kaiser, Northwest (13th); Kaiser, Mid-Atlantic States (22nd); and Kaiser, Colorado (24th). Together, Kaiser's 12 regions had about 6.6 million members in 1991. HIP of Greater New York ranks third among individual HMOs, and HIP's four HMOs have slightly more than 1 million members (Porter et al. 1992).

The name "health maintenance organization" itself was coined in 1970 by Paul Ellwood, then director of the American Rehabilitation Foundation, and was soon adopted by the Nixon Administration as part of its initiative for health care reform. The term was soon used to refer to both prepaid group practices (the Kaiser model) and to medical care foundations (later known as independent practice associations or IPAs) that maintained the basic fee-for-service structure for individual physicians.

The distinction of "network HMOs" was introduced in 1981 by InterStudy. They differ from group-model HMOs in that the HMO contracts separately with more than one physician group. Compared to group-model and staff-model HMOs, network HMO physicians have fewer enrollees per physician, since they may not work exclusively for the HMO. Whereas physicians in most staff-model HMOs and some group-model HMOs are salaried, nearly all physicians in network HMOs are paid on a capitation basis (Gold 1991b). The largest HMOs currently organized on the network model include Health Net (based in Woodland Hills, California), with 819,000 members;[12] PacifiCare of California (based in Cypress), with 496,000 members; and HMO Illinois (owned by Blue Cross/Blue Shield of Illinois), with 311,000 members (Porter et al. 1992).

The independent practice association model of HMO is quite a different entity, both in technical definition and in the potential ways that it operates within the health care system. Instead of using physicians who are entirely responsible to the organization as in group-model or staff-model HMOs, the physicians contract independently and nonexclusively with the HMO. Most such physicians may in fact contract with several different IPAs (as well as with PPOs and other managed-care arrangements) and probably see other patients on a fee-for-service basis. Some of the largest organizations that operate primarily on the IPA model include US Healthcare (based in Blue Bell, Pennsylvania), with more than 1,200,000 members in Pennsylvania, New Jersey, and several other northeastern states; United HealthCare Corporation (based in Minneapolis), with 919,000 members in 17 different managed-care plans; and Blue Choice (run by Blue Cross/Blue Shield of Rochester, New York), with 335,000 members (Porter et al. 1992).

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[12] InterStudy (Porter et al. 1992) classifies Health Net as a "mixed model" HMO with both network and IPA features.

The preferred provider organization developed as a significant form of managed-care organization during the 1980s. PPOs emphasize contracts between providers and purchasers, whereby the providers agree to supply services on a discounted fee-for-service basis and comply with utilization review conducted by the PPO. Because of the fee-for-service basis for payment, the purchaser — not the provider — is at risk for the cost of care. Although individual subscribers are not obliged to use the preferred providers, they are given strong financial incentives to do so (Gabel et al. 1986).

PPOs may be sponsored by providers (including hospitals or physician groups), by private investors, or by purchasers (including Blue Cross/Blue Shield plans, commercial insurers, or employers). According to Gabel and his colleagues (1986), well-managed PPOs differ from other discounted fee-for-service systems because they seek to contract selectively with cost-effective providers, rather than with the largest possible number of providers. Skeptics, however, contend that too often PPOs select physicians on the basis of attracting large numbers of subscribers, rather than on the basis of quality.

Some observers suggest that, to the provider, the differences between PPOs and IPAs become minimal if both use similar fee schedules (rather than discounted charges), well-developed network selection and retention procedures, and utilization management techniques. Although physicians are not formally at financial risk in a PPO, they may find the risk of being dropped by a selective PPO more serious than the limited financial risk for overspending in an IPA (Miller and Luft 1991).

To the consumer, decisions by the PPO (or other types of plans) to select and retain providers can have serious implications. Those who may have decided to join a particular PPO or IPA based on the presence of certain physicians as participating providers are left with a dilemma when those providers leave the plan. Even though other physicians are available, consumers may be reluctant to switch providers and may feel that continuity of care is threatened.

Exclusive provider organizations fall somewhere between the HMO and PPO models. Like PPOs, they contract with individual providers who agree to offer discounts on the cost of care. Like HMOs, they require subscribers to stay within the network of providers. Commonly developed by those larger employers that self-insure, they often avoid the state regulatory structure that applies to either HMOs or PPOs.

Managed Care and Traditional Insurance Plans

Many people in the past equated managed care with the world of HMOs and PPOs, an accurate perception as long as both organized medicine and the insurance industry maintained a system of unconstrained fee-for-service medicine. One factor in this decision was the strong desire of their clients to maintain freedom of choice in selecting providers. Because traditional indemnity insurance historically has not reviewed claims rigorously for the appropriateness of the services rendered, it has done little to constrain growth in unnecessary services. In recent years, however, insurers have been turning to forms of managed care in growing numbers, responding to many of the same incentives that have spurred the growth of alternative delivery systems.

Yet there is a significant difference between the type of managed care practiced by group-model and staff-model HMOs and much of what is introduced by traditional indemnity insurers. In the latter setting, managed care separates the oversight of care from the formal providers of care. Purchasers establish or contract for utilization review systems to monitor or regulate the use of services. HMOs, on the other hand, aim to integrate care management and utilization review with the provision of health care. The provider is then responsible to the purchasers for the costs and quality of care delivered to enrollees, but purchasers are separated from the day-to-day management (Betley 1989).

Some analysts find this distinction significant. Etheredge and Jones (1991), for example, question whether insurers are capable of creating the kind of managed-care arrangements that manage the delivery of care rather than regulate it. Private insurers, however, argue that they have the skills and resources — including experience working with employers, employees, and providers, and the technological base for claims analysis — needed to make managed care work (Lynn 1991).

Available data do not answer these questions but describe how insurers are using managed care. Whereas staff-model HMOs place physicians and other providers on their payroll, insurers are more likely to create a network of affiliated providers, whether under the PPO rubric or some other name. The 1990 HIAA survey documented some of the trends in utilization management activities seen in conventional health plans. More than half of such plans had incorporated the following features: preadmission certification (79 percent), concurrent utilization review (68 percent), case management for large claims (67 percent), mandatory second opinion for surgery (52 percent), and case management for mental health (50 percent). In addition, one in five plans had incorporated PPO riders, whereby policies are amended to allow coverage at a reduced rate (lower deductibles and coinsurance) for services obtained from preferred providers (Sullivan and Rice 1991).

Point-of-Service Plans

One of the more popular recent innovations has been the so-called point-of-service (POS) plan, in which employees have an incentive to use providers who are part of a tightly managed network but can go outside the plan by paying more out of pocket. A variant known as a triple-option plan combines primary care gatekeepers, provider risk sharing, and preventive care coverage from the HMO model; point-of-service choice, provider discounts, and utilization management from the PPO model; and free choice of health care providers from the indemnity model. Consumers choose — at the point of service — whether to use providers from the HMO, the PPO, or from outside the network (Gray 1991). To the enrollee, the distinctions may be hard to see: a POS plan with a primary care physician and strong financial incentives to stay in the network may look very much like a PPO and only slightly different from an IPA (Miller and Luft 1991).

The POS plan represents a compromise between the demands of employees (and providers) to retain freedom of choice and the desire of employers to move more rapidly into managed care. It also represents the desire of commercial insurers to compete more successfully with the efforts of their HMO and Blue Cross/Blue Shield competitors. To work, these innovations must manage care more aggressively within the network and at the same time increase cost sharing substantially for those who choose to go outside — making freedom of choice illusory for many enrollees.

The most-publicized point-of-service experiment took place at Allied-Signal, Inc. The company signed a contract in March 1988 with the CIGNA Corporation to provide benefits for all its 86,000 employees and dependents. Under the plan, known as the Health Care Connection, the one insurer — CIGNA — gave employees a choice each time they use the health system: (1) HMO-style coverage, including preventive care, at minimal out-of-pocket cost from designated providers, or (2) indemnity-style coverage with substantially higher out-of-pocket cost from providers of their choosing. Although Allied-Signal was the first national company to adopt this insurance option, regional companies — such as Southwestern Bell and the May Company Department Stores — had adopted this approach earlier. (The CIGNA/Allied-Signal plan went a step further by placing the insurer at risk through limits on future premium increases.) The Wyatt Company estimated that in 1988 about 15 percent of all salaried employees participated in some type of plan in which managed care and indemnity benefits were offered by the same insurer.

It is too early to declare the point-of-service plan a success or failure, but it is not too soon to look at some preliminary results. Allied-Signal has found that about three-fourths (78 percent) of its employees used network providers consistently, whereas about 85 percent of the costs were attributable to such providers. Both hospital admissions and lengths of stay were considerably lower for those using the network, and the company reports that per capita costs — after 18 months — were reduced to $2,450 from a projected $3,200 in 1990.[13] (At the same time, the guaranteed rate of increase feature has not been repeated, since CIGNA feared it could not continue to control the rise of health costs.) Similar results have been reported by Southwestern Bell, including a reduction in per-person claim costs, a decline in overall health care costs, and reductions in the rate of hospital admissions and hospital days (Gray 1991).

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[13] Some analysts believe that the 1990 projection was unrealistically high.

THE GROWTH OF MANAGED CARE

In 1970, when prepaid group practices became labeled as HMOs, there were 37 HMOs in 14 states, nearly half of which were in California; about 3 million people were enrolled. By 1975, stimulated in part by the passage of the Health Maintenance Organization Act, there were 183 HMOs with more than 6 million people receiving health care in this manner. The numbers continued to grow steadily, passing the 10 million mark in 1981, topping 20 million in 1986, and surpassing 30 million in 1988. By the end of 1990, there were 569 HMOs with 36.5 million members (Gruber et al. 1988; Gold 1991b).

Another marker of this pattern of growth is the degree to which the market has diversified and is no longer dominated by Kaiser Permanente. In 1978, Kaiser represented nearly half (46 percent) of all HMO enrollment in the country. But by 1990, that share had dropped to less than one in five (18 percent) — even though Kaiser's enrollment had grown from 3.5 million to 6.5 million (Gruber et al. 1988; Gold 1991b).

The growth of managed care has varied by region of the country, especially with regard to HMOs. The HIAA survey showed that the market share of HMOs was nearly twice as high in the west (30 percent) and north central (26 percent) regions as in the northeast (17 percent) or south (13 percent) (Sullivan and Rice 1991). On a state-by-basis, the greatest penetration of HMOs is found in California (32 percent), Massachusetts (30 percent), Minnesota (29 percent), Oregon (26 percent), Hawaii (23 percent), Wisconsin (22 percent), and Colorado (21 percent). At the other extreme, three states — Alaska, Mississippi, and Wyoming — have no HMO enrollment (Porter et al. 1992). Considered in terms of large metropolitan areas, HMO penetration has exceeded 40 percent in the San Francisco Bay area (46 percent) and the Minneapolis-St. Paul area (44 percent) and is more than 30 percent in the metropolitan areas surrounding Milwaukee; Portland, Oregon; and Los Angeles (Gold 1991b).[14]

These geographic patterns probably reflect the earlier start for HMOs in western and certain north central states, the problems HMOs face in rural areas, and the different industrial base in different parts of the country. They also reflect dissimilar attitudes on the part of both the medical community and the general population — differences that may result from such factors as the historical accident of where plans first became popular or cultural variations in the values that dominate disparate parts of the country.

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[14] Note that regional figures come from a different data source than state and metropolitan area figures. Sullivan and Rice (1991) base percentages on market shares among employer health plans in the HIAA survey; GHAA (Gold 1991b) and InterStudy (Porter et al. 1992) represent HMO enrollment as a percentage of the population, from their surveys.

The growth of managed care, however, is not simply the growth of HMOs. The dramatic development of the 1980s was the virtual disappearance of the traditional unmanaged health plan and the accompanying growth of the various types of managed-care plans (Table 12-2). These plans include HMOs, PPOs, and conventional health plans with some form of utilization management activities, with the fastest growth occurring in this last model (Sullivan and Rice 1991; Hoy et al. 1991).

Table 12-2. Growth in Market Share of Managed-Care Arrangements

	1987	1988	1989	1990
		(percent)		
Unmanaged fee-for-service	41	28	18	5
Managed fee-for-service	32	43	49	57
HMOs	16	18	17	20
PPOs	11	11	16	13
Point-of-service plans	--	--	--	5

Source: Hoy et al. 1991.

Insurance companies are not the only actors in the insurance marketplace that are experiencing changes. Increasing numbers of HMOs now offer coverage beyond the traditional HMO model. According to a GHAA survey, about 20 percent of all HMOs offered some form of open-ended or point-of-service plan in 1990 (Gold 1991b). Typically such plans permit enrollees to select either HMO physicians or family physicians outside the plan for their primary care. The plans make use of deductibles and copayments and require prior authorization for referrals to specialists.

Employer Strategies for Managed Care

Like the Allied-Signal Corporation, many large firms are taking an increasingly active role in designing new benefit packages for their employees. Driven by rising health costs, employers are looking to managed care as a key ingredient in their plans to contain costs. HMOs became common features in corporate health plans, as multiple-choice benefit plans proliferated during the past three decades. At times, companies seemed to be trying to include every HMO in the community in their menu of options. Today, some companies are reevaluating the traditional role of HMOs in their multiple-choice benefit plans. For example, the Xerox Corporation has tried to shift from offering a large array of HMO options to creating a national network of well-managed, high-quality HMOs. It sought to de-emphasize simple price discounts in favor of finding six HMO firms that serve as national managers of the Xerox networks. Each network manager takes on certain responsibilities to facilitate administration for Xerox and perform evaluations of participating plans. A strong emphasis is placed on total quality management. Employees are offered financial incentives to choose one of the networks as their primary source of care. In pursuing this strategy, Xerox has "gone further than other large employers to exercise its collective purchasing power in identifying high-quality managed health care providers and designing and implementing a nationwide strategy" (Darling 1991).

Honeywell, Inc., is a company that has been an innovator in health cost containment and the use of managed care in recent years. A few years ago, the company dropped all of its HMO plans and placed its emphasis on PPOs. Because the company is philosophically opposed to capitation, payment is based on a blend of claims experience and capitated rates (care provided by HMO physicians is converted to a fee-for-service equivalent). The company now purchases care from either EPOs or PPOs that have an internal quality improvement process and an internal utilization management process. With a combination of total quality management and what it calls "fee-for-service managed care," the company believes it has the basis for lowering costs while maintaining quality of care (Gray 1991).

For other companies, the answer has been to contract directly with providers instead of working through traditional insurers or HMOs. Firms such as Southern California Edison (SCE), the Gillette Company, Goodyear Tire and Rubber, and Nestlé Foods Corporation — some of which have a long history of company clinics — hire their own physicians. While this forces companies to learn how to manage costs on their own, it gives them more direct control over both costs and quality and provides them insight into developments in medical care. This approach is favored by some companies with concentrations of employees in medically underserved areas and requires substantial management expertise on the part of the corporation. But Goodyear and SCE report significant savings for their clinic programs alone. And SCE has estimated overall first-year savings of about 20 percent of corporate health costs, although about one-fourth of the savings is attributable to increased cost sharing by employees (Kosterlitz 1989; Gray 1991).

THE FEDERAL ROLE IN MANAGED CARE

The federal government first became involved in managed care in 1959, when the Federal Employees Health Benefits Program (FEHBP) was created. The law initiating the program permitted participation by comprehensive medical plans, and 21 such plans, the predecessors of modern-day managed-care plans, started enrolling federal employees as members. This action marked the first time that a federal agency recognized and permitted access to group practice prepayment plans, and it launched similar legislation for a number of state and local governments. In fact, FEHBP's inclusion of these plans predated their offerings by many private-sector employers (Enthoven 1989).

A major initiative to encourage growth of HMOs was the passage in 1973 of the Health Maintenance Organization Act and the establishment of standards for federal qualification. The law included funds for the development and operation of new HMOs as well as standards for HMOs that wished to receive a government seal of approval. As implemented, it required that firms employing 25 or more workers and offering an insurance plan to their employees must offer employees the option of joining at least one of each type of federally qualified HMO (group, staff, or IPA) and must make contributions on behalf of employees equal to those provided for traditional indemnity plans. Qualifying HMOs had to offer at least a package of basic health services that included hospitalization and physicians' services as well as mental health care, home health services, and others. Other requirements included community rating, open enrollment, limitations on underwriting and copayments, and consumer representation. These requirements were modified over the years, but most experts agree that the law never stimulated the enormous growth envisioned by some in the Nixon Administration. Most would agree, however, that it did contribute to significant growth and development of the industry.

From the enactment of Medicare in 1965, the program has done business with various types of managed-care organizations. Initially, however, they could only participate by receiving cost-based reimbursement. Many HMOs did not even have the capacity (or the desire) to track costs or bill on this basis; as a result, only 31 HMOs had contracts with Medicare by the end of 1979 (CBO 1990).

Both the Carter and the Reagan Administrations viewed HMOs as providing a potential means for injecting competition into the Medicare program and reducing expenditures. A series of demonstration projects ensued. A methodology was developed for Medicare to pay HMOs on a capitation basis, the adjusted average per capita cost (AAPCC). For a given county, the AAPCC is designed to be the equivalent cost of providing fee-for-service care to Medicare HMO beneficiaries, after adjusting for differences between HMO and non-HMO beneficiaries in their age, sex, disability status, Medicaid eligibility, and whether they are institutionalized (PPRC 1988).[15]

The Medicare Capitation Demonstrations enrolled beneficiaries in risk contracts between 1980 and 1981. Eight HMOs participated, with a variety of risk-sharing arrangements; reimbursement ranged from 85 to 95 percent of the AAPCC. A second program, the Medicare Competition Demonstrations, involved 27 HMOs that enrolled beneficiaries starting between 1982 and 1984. All of the participating plans had contracts placing them at full financial risk and reimbursement was set at 95 percent of the AAPCC (CBO 1990). In general, evaluation of these demonstrations found that the HMOs were successful in enrolling Medicare beneficiaries, that the overall satisfaction level of enrollees was high, that quality of care was at least satisfactory, and that the HMOs had only a small effect on hospital use (Langwell and Hadley 1990).

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[15] The Commission has recommended changes in the AAPCC payment mechanism in earlier reports (PPRC 1988; 1990).

The Congress, as part of the Tax Equity and Fiscal Responsibility Act of 1982, created a permanent arrangement for allowing HMOs to enter into risk contracts with the Medicare program. Implementation of this program began in 1985; by mid-1986, 142 HMOs had signed Medicare risk contracts and had enrolled more than 735,000 Medicare beneficiaries. This rapid growth peaked in 1987; with consolidation in the industry, the number of HMOs with risk contracts had dropped to 97 by 1990 (although the number of enrollees had risen to 1.1 million). Like the industry as a whole, most of these were concentrated in a handful of states. Minnesota had by far the largest penetration with 24 percent of its Medicare beneficiaries enrolled in HMOs. Four other states (Oregon, Nevada, California, and Colorado) had at least 10 percent of their beneficiaries enrolled in 1988 (CBO 1990).[16]

A new Medicare managed-care program has been undertaken more recently. Concerned that many beneficiaries are simply unwilling to enroll in HMOs and give up their existing relationships with physicians, the Health Care Financing Administration (HCFA) has established several Medicare PPO demonstration projects. The first Medicare PPO demonstration was initiated in 1988. Under this program, Blue Cross/Blue Shield of Arizona offered a PPO linked with a Medigap plan, and CAPP CARE (Orange County, California) offered a nonenrollment PPO, not linked with Medigap insurance. In 1990, the Congress authorized (under the Omnibus Budget Reconciliation Act of 1990), the establishment of Medicare Select plans in 15 states. Under these plans, beneficiaries buy what amounts to a traditional fee-for-service Medigap policy, except that coverage is limited to the designated preferred providers. Beneficiaries who stay within the network receive Medicare benefits plus full payment of deductibles and coinsurance. Those who seek care outside the network receive full Medicare coverage but may be responsible for deductibles and coinsurance (Wilensky and Rossiter 1991).[17]

Total HMO enrollment of Medicare beneficiaries (including risk contracts, cost contracts, and PPOs) in 1991 was approximately 2.1 million people, nearly double the level of enrollment in 1985. This total represents about 7 percent of all Medicare beneficiaries, or about one-third the market penetration for HMOs alone in the under-65 population. Of the total Medicare HMO enrollees, about two-thirds (64 percent) are enrolled in HMOs that hold risk contracts with the government, with the remainder in those with cost contracts (Wilensky and Rossiter

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[16] HCFA's 1992 data for risk contracts alone show a similar concentration, with enrollments in six states over 10 percent of all beneficiaries (Oregon, California, Arizona, Florida, Hawaii, and Nevada).

[17] Other demonstrations under way include the application of coordinated care principles to treating substance abuse in pregnant women and bundled payment demonstrations for CABG and cataract surgery (Wilensky and Rossiter 1991).

1991). Although these enrollment levels have risen steadily over the past decade, they have never reached the more optimistic projections put forth at various times by the Department of Health and Human Services (HHS). Problems with calculation of the AAPCC and challenges in applying managed-care techniques to elderly populations have contributed to keeping enrollment low.

HHS has also encouraged state Medicaid programs to experiment with the development of managed-care initiatives. According to 1991 data, about 2.6 million Medicaid recipients were enrolled in managed-care plans. These include about 1.6 million in HMOs or other prepaid health plans and about 1 million in primary care case management plans, the latter being the fastest growing segment of Medicaid managed care. This total constituted roughly 10 percent of all Medicaid recipients; fewer than 2 percent were enrolled in 1981 (Wilensky and Rossiter 1991). Some states under their Medicaid waivers can mandate participation in managed care, thus helping to push the market share for Medicaid managed care higher than that for Medicare. Several states have recently enacted legislation to expand enrollment in Medicaid managed care dramatically.[18]

Both Medicare and Medicaid managed care have received considerable criticisms over the years. During the mid-1980s, highly publicized problems with one HMO in Florida highlighted potential problems with Medicare HMOs. At the same time, critical investigations were conducted by the Senate Special Committee on Aging (U.S. Senate 1987) and the General Accounting Office (GAO 1986; 1991). These raised questions about quality of care, especially charges of underservice, and about marketing and enrollment techniques, including assertions that only healthy beneficiaries were being sought and that quality assurance efforts were inadequate. Wilensky and Rossiter (1991), on the other hand, cite several studies in support of conclusions that some Medicare HMOs have reduced hospitalizations and increased the use of primary care, that beneficiary satisfaction is high, and that quality of care in Medicare HMOs is at least equal to that provided in fee-for-service settings.

Medicaid managed care also came under attack, with charges that enrollees in so-called poor people's HMOs were highly vulnerable to inadequate treatment without any recourse. Again, GAO studies exposed serious problems of mismanagement among several Medicaid managed-care programs, notably those in Philadelphia and Chicago. At the same time, several studies have concluded that Medicaid managed care provides care that is at least equivalent to that provided under fee-for-service arrangements, while in some cases improving access for beneficiaries and eliminating use of unnecessary services.[19]

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[18] Medicaid managed care is discussed in greater detail in Chapter 6.

[19] See Chapter 6 for more detailed information on these studies.

The debate continues between advocates and critics over approaches to ensuring adequacy of payments and mechanisms for protecting beneficiaries and assuring quality in both programs. There is, for example, general agreement by both advocates and critics that the current AAPCC method of payment for Medicare risk contractors is inadequate. It does not adequately adjust for differences in the health risk of HMO and non-HMO beneficiaries. Currently, plans with a disproportionate number of high-risk beneficiaries may not receive equitable payments. HCFA has been working for some time on modifications in its payment methodology but has given no indication that it is close to a solution.

The provider community has continually argued that internal quality assurance mechanisms are effective in protecting access and quality of care. Others, such as consumer organizations, have argued for strong regulation, saying that the industry has a poor track record in respect to Medicare and Medicaid managed care. HCFA is in the process of developing improved quality assurance programs for both Medicare and Medicaid.[20]

While the philosophical commitment to managed care by the federal government has persisted, the rhetoric has been shifting from managed care to coordinated care, which the Administration believes "better expresses the idea that well-organized care improves quality and puts taxpayers' dollars to better use" (Wilensky and Rossiter 1991).

New initiatives being developed by HCFA include a point-of-service option, where Medicare would contract with new contracting entities that would develop a network of preferred providers in an area. Selected on the basis of quality assurance systems, outcomes measures, and negotiated prices, these providers would be expected to manage the care they provide to patients. Beneficiaries would have the option to choose such providers and would be offered a financial incentive to do so. A special feature of these new plans would be the bundling of Part A and Part B payments for the particular services offered by the POS contractor (Wilensky and Rossiter 1991).

COST CONTAINMENT, QUALITY ASSURANCE, AND MANAGED CARE

Cost containment and quality assurance represent the goals most often articulated for all types of managed care. Yet evidence on the effectiveness of managed care — regardless of what type of managed care is considered — in meeting these goals is scanty at best. A 1990 overview of managed care by the Congressional Budget Office could draw only a "few tentative conclusions" about the impact of managed care on costs and utilization (CBO 1990). Luft (1988) sees only slightly more of a basis for drawing conclusions, stating that the "conventional wisdom now is that HMOs are able to provide comprehensive coverage at lower total cost while maintaining adequate quality of care. Unfortunately, the existing evidence on HMO performance is probably less useful today than it was a decade ago because of the changing medical care market environment."

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[20] See Chapter 6 for further discussion of HCFA's plans for quality assurance.

Cost containment remains a difficult nut to crack in American medicine. Even with the growth of managed care, costs continue to rise steadily. Various surveys have shown that costs continue their upward trend in all health care settings, although growth rates are somewhat lower in managed-care settings than under traditional unmanaged indemnity insurance. In 1991, reports indicated that premium increases for managed-care plans (between 10 percent and 15 percent) were only about one-half those for indemnity insurance (between 20 percent and 25 percent), while PPO plans fell in between (15 percent to 19 percent) (Darling 1991). Biased selection and cost shifting to employees may, however, be factors helping to explain these differences.

At the same time, quality considerations remain a critical point of concern for managed care. Critics point to the incentives for underservice as a major worry. The industry, on the other hand, believes that it is making new headway with its quality assurance initiatives. The National Committee for Quality Assurance, created by a partnership of purchasers, consumers, and HMOs, is initiating a new accreditation process for HMOs, a process many believe will emerge as a force for improved quality (O'Kane 1991).

Disentangling the effects of some of the individual techniques of managing care has proved difficult, because in most cases these techniques are offered as a package. Although various researchers have failed to find clear-cut evidence of overall savings achieved through utilization management (Gray and Field 1989; Custer 1991), recent studies have shown an effect on hospital utilization. Feldstein and his colleagues (1988), for example, examined a utilization review program used by one large insurer for 88 employee groups between 1983 and 1985. They found that utilization review reduced hospital expenditures by 11.9 percent and total medical care expenditures by 8.3 percent, compared to groups without a utilization review program. Reductions were greatest where hospital admission rates were initially high. Nevertheless, some of these same studies have shown that, where hospital costs fell, ambulatory costs were higher, consistent with the idea that care is being shifted from the hospital to outpatient settings.

It is widely argued that, to show results, managed care must rely on something more than the application of a few cost-containment measures like preadmission screening or higher copayments. According to Barbara Thorpe Howe, a benefits officer at the Marriott Corporation, "reducing benefits [by restricting clinical choices] actually does not decrease the cost of medical services, ...it merely decreases the total amount the company pays for services rendered.... Offering managed care gives companies a method of reducing the problem of rising of costs and not simply reducing the pinch of the company outlay for benefits" (FAHS 1989).

Along these same lines, insurers that are in the forefront of their industry appear to believe that something more than utilization management is necessary. In the HIAA survey, the trend-setting insurers were far greater believers in channeling patients to efficient providers (47 percent) than in the value of utilization review (1 percent) or discounts (24 percent); by contrast, other insurers still believe in the potential of utilization review (66 percent) (Hoy et al. 1991). Miller and Luft (1991) read these and similar results and drew some additional conclusions. They point out that, as the market evolves, carriers that can obtain large market shares in local areas will be far more effective at using some of the more innovative managed-care techniques such as physician profiling and education. They also observe that the emphasis on provider selection and retention raises questions of how such decisions are really being made.

Analyzing the impact of more comprehensive managed-care programs has been only a little more productive than attempting to look at the individual elements of managed care.[21] The most-cited study was the Health Insurance Experiment conducted by RAND, which concluded that one HMO (GHC of Puget Sound) was able to reduce hospital admissions by about 40 percent compared with expected use had these individuals remained in the fee-for-service sector (Manning et al. 1984). Researchers working on this project, which randomly assigned people into either the HMO or the fee-for-service plan, also found that enrollees in the two types of plans had similar results on almost all measures of general and physiologic health after three to five years, although low-income people who were sick at the beginning of the experiment had somewhat worse outcomes in the HMO (Ware et al. 1986).

Still, as Luft (1988) pointed out, this study, like others that focused on the leading group-model or staff-model HMOs, cannot easily be generalized to other HMOs or other types of managed care. Furthermore, many who have studied these issues have questioned whether selection bias — the tendency of healthier people to select HMO enrollment over indemnity coverage — adds to the difficulty faced by those seeking to draw conclusions from analyses of claims data or outcomes data.[22]

Other studies have found that the presence of HMOs in a particular market area can potentially reduce hospital cost inflation. Robinson (1991) looked at price competition in California between 1983 and 1988 and concluded that the average rate of growth in costs per admission was about 9 percent lower in markets with high HMO penetration compared to those with low penetration. Welch (1991) focused on the market penetration of Medicare HMOs and found that as the Medicare HMO market share increased, average Medicare expenditures per beneficiary dropped.

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[21] A number of earlier studies on HMO performance were reviewed by Gold (1991a). A major project is under way involving a consortium of 12 HMOs to test the feasibility, validity, and reliability of methods to compare the quality of care delivered by different plans. The approach of this project is population-based and attempts to examine care delivered in all settings and to assess both underuse and overuse of services (Siu et al. 1991).

[22] Selection bias was not an issue in the RAND health insurance experiment because participants were assigned randomly.

The few studies conducted on IPA-model HMOs suggest that they are less effective at constraining utilization or costs (Custer 1991). Similarly, the research on PPOs is limited. One recent study concluded that PPO users had fewer outpatient physician visits than non-PPO users (although no difference was observed in the rate of hospital admissions) and that costs were 5 percent to 37 percent lower than for non-PPO users (Hosek et al. 1989).

Clearly, the research base for evaluating the effects of managed care on costs and quality is inadequate to the task of drawing meaningful conclusions. As Miller and Luft (1991) conclude, "Some very basic questions about managed care remain unanswered. We do not even know if managed care saves money." Even if savings are identified, the causes of those savings remain elusive. Nor is it understood whether any savings realized come at the expense of higher administrative costs in the health system as a whole, greater hassle to physicians, or cost shifting to individuals or to other payers. More research on the various elements of managing care would be a valuable asset in understanding what works and what does not work.

MANAGING CARE: BEYOND MANAGED CARE

As the Commission looks ahead to the potential of managing care to move beyond the rhetoric of managed care, there are helpful models of managed-care organizations that are taking a comprehensive approach to quality management. Both the continuous quality improvement approach employed by organizations such as the Harvard Community Health Plan (Berwick 1989) and the sophisticated use of claims data for quality management by organizations such as United HealthCare and US Healthcare (Goldfield 1991) show potential ways that managed care can move beyond the regulatory forms of management that are all too common in many managed-care organizations. It is important to build on this base and apply the growing array of quality assessment tools — profiling of practice patterns, practice guidelines, and outcomes research — to the management of care in all settings.

A critical issue is the extent to which management of health care is best performed within some organized structure or within a broader system of health care delivery. Although the evidence is scanty, the isolated use of individual elements of managing care appears to have only limited effects on costs and quality, whereas broader management strategies applied within managed-care organizations appear to have somewhat stronger effects. Some evidence suggests that larger, more organized health care settings have a greater potential to employ the tools of managing care effectively. Nevertheless, the capability of organized medical practice to improve the quality of care delivered in these settings remains an open question (Eisenberg and Kabcenell 1988). Further research in this domain would be very useful in determining whether organized managed care brings net benefits to the health care system and whether the delivery of high-quality, cost-effective care requires the environment of a broader system.

In taking a more extensive look at these themes over the next year, the Commission plans to consider goals for managing care and to assess different approaches in terms of those goals. An equal concern is the environment that best fosters effective management, specifically whether HMOs and other organized group practices hold an advantage over less structured environments and whether broader systems of health care delivery are needed. Given the considerable interest in expanding the role of managed care in public programs, the Commission will seek to learn what features of managed care translate well from the private sector to the public sector. At the same time, the Commission is concerned that the populations for which the public sector has taken responsibility are rather different and that, for example, financial incentives that may be effective for privately insured populations may be inappropriate for Medicaid populations. The lessons learned from these analyses may allow the Commission to consider the characteristics of an effective managed health system and to assess the potential for increasing the appropriate use of physicians' services through managed-care approaches, especially for the Medicare and Medicaid programs.

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APPENDIX

COMMISSION RESPONSIBILITIES MANDATED BY CONGRESS, 1985 TO 1990

The Physician Payment Review Commission was established by Congress through the Consolidated Omnibus Budget Reconciliation Act of 1985 (P.L. 99-272). It was charged with advising and making recommendations to the Congress on methods to reform payment to physicians under the Medicare program. Recommendations are to be submitted to the Congress no later than March 1 (amended to March 31 by the Omnibus Budget Reconciliation Act of 1987, P.L. 100-203) of each year.

The legislation identified eight specific areas that the Commission should address in its recommendations to the Congress, including the feasibility of reducing specialty and geographic differences in payments, increasing physician participation in the Participating Physician and Supplier Program, the feasibility of physician diagnostic-related groups, and the appropriate utilization of assistants-at-surgery. The legislation also required that the Commission advise and make recommendations to the Secretary of Health and Human Services (HHS) regarding the development of a resource-based relative value scale for physicians' services.

In the Technical and Miscellaneous Revenue Act of 1988 (P.L. 100-647), the Congress further specified that the Commission consider policies for moderating the rate of increase in physicians' expenditures and utilization of physicians' services.

With the passage of physician payment reform legislation in the Omnibus Budget Reconciliation Act of 1989 (OBRA89), the Commission was assigned the following new responsibilities: advising the Congress on setting standards for expenditure growth and updating fees, commenting on reports by the Secretary on issues related to utilization, access, and assignment policy, and conducting a series of mandated studies. These studies included payment for practice expenses, geographic payment areas, payment for nonphysician practitioners, physician payment under Medicaid, and payment for assistants-at-surgery.

The Congress further revised the Physician Payment Review Commission's responsibilities as part of OBRA90. It repealed the requirements relating to the development of the relative value scale, while expanding the Commission's responsibilities in other areas. Under OBRA90, the Commission is required to consider:

- major issues in implementation of the Medicare Fee Schedule;

- further development of the volume performance standard system, including development of state-based programs;
- payment incentives to increase access to primary care and other services in inner-city and rural areas, including federal policies regarding the level of Medicaid payments to physicians;
- the supply and specialty distribution of physicians and financing of graduate medical education;
- utilization review and quality of care, including the effectiveness of peer review organizations and other quality assurance programs;
- options to constrain the costs of health care to employers, including incentives under Medicare;
- medical malpractice reforms; and
- physician licensing and certification.

The Commission is also required to comment on the President's budget recommendations affecting physician payment under Medicare.

BIOGRAPHIES

COMMISSION MEMBERS

PHILIP R. LEE

Philip R. Lee, M.D., Professor of Social Medicine, has been Director of the Institute for Health Policy Studies at the University of California, San Francisco (UCSF) since 1972. He served as Chancellor of UCSF from 1969 to 1972 and was Assistant Secretary for Health and Scientific Affairs in the Department of Health, Education, and Welfare from 1965 to 1969. Dr. Lee is the author of more than 100 articles in the health field and has coauthored numerous books. His teaching and research endeavors in the field of health policy focus on health care for the elderly, prescription drugs, physician payment, reproductive health policy, and AIDS-related policies and costs. A frequent adviser to federal, state, and local health policymakers, Dr. Lee also serves on the boards of a number of nonprofit organizations. In 1986, he was appointed Chairman of the Physician Payment Review Commission.

LINDA H. AIKEN

Linda H. Aiken, Ph.D., is Trustee Professor of Nursing, Professor of Sociology, and Director of the Center for Health Services and Policy Research at the University of Pennsylvania. Before joining the University faculty in 1988, she was Vice President of the Robert Wood Johnson Foundation for 13 years. Dr. Aiken is a frequent adviser to federal and state policymakers. She is the author of numerous scientific and policy papers on access to health services; the organization and financing of health services, particularly AIDS care; and health manpower policy. Dr. Aiken is a member of the Institute of Medicine of the National Academy of Sciences and the National Academy of Social Insurance, and serves on the National Advisory Council of the Agency for Health Care Policy and Research. A former President of the American Academy of Nursing, Dr. Aiken was also a member of the 1982 Social Security Advisory Council. She has served on national advisory groups on the organization and financing of long-term care for the elderly. She received nursing degrees from the University of Gainesville, and a doctorate in sociology and demography from the University of Texas at Austin.

DREW E. ALTMAN

Drew E. Altman, Ph.D., is President of the Henry J. Kaiser Family Foundation, one of the largest private foundations devoted exclusively to health. Dr. Altman is a former Commissioner of the Department of Human Services for the state of New Jersey (1986-1989), where he is credited with the design and implementation of the state welfare reform program, the redesign of policies and programs for the homeless, and the development of major school-based initiatives for children. Dr. Altman was also the Director of the Health and Human Services Program at the Pew Charitable Trusts and Vice President of the Robert Wood Johnson Foundation. Before joining the Johnson Foundation, he served in a senior position in the Health Care Financing Administration. Dr. Altman received his doctorate in political science from the Massachusetts Institute of Technology and has published widely on health issues.

RICHARD V. (DICK) ANDERSON

Richard V. (Dick) Anderson is Vice President of Medical Economics and Statistics for the Kaiser Foundation Health Plan, Inc. and Kaiser Foundation Hospitals, a position he has held since 1980. He began his career with Kaiser in 1968 as a planning analyst and was later named Director of the Department of Medical Economics and Statistics. His responsibilities include rate setting, benefit design, reporting, market analysis, and planning. In addition, he actively represents the Plan in relations with employers, consultants, government agencies, business coalitions, and other external organizations. Mr. Anderson received his bachelor of science degree from Washington State University, earned a master of public health degree from the University of California at Berkeley, and has completed the Harvard Business School's Advanced Management Program.

JIM BOB BRAME

Jim Bob Brame, M.D., is a family physician from Eldorado, a small, isolated community in west Texas, where he has practiced for more than 20 years. He is currently Director of the Office of Rural Health for the Texas Tech University Health Sciences Center and Associate Professor of family medicine. Dr. Brame's career-long interest has been in improving access to and quality of rural health care, and he has provided advice on the development of federal and state legislation affecting rural health care. As President of Medica-Diversified, he helped design and implement model rural health facilities in Texas and worked to establish clinics in Guatemala. He has served as a consultant to the American Hospital Association's Council on Small/Rural Hospitals and Committee on Hospital Medical Staff and Medical

Affairs. Dr. Brame was formerly a President of the Texas Medical Association and has held leadership roles in both the Texas and the American Academy of Family Physicians, as well as many civic and charitable organizations.

P. WILLIAM CURRERI

P. William Curreri, M.D., is President of Strategem of Alabama, Inc., an international marketing and consulting firm in health care. Dr. Curreri has served as Professor and Chairman and Chief of Surgery at the University of South Alabama in Mobile. Dr. Curreri also served on the faculty of the University of Washington School of Medicine in Seattle, and was named the Johnson & Johnson Professor of Surgery while on the faculty of Cornell Medical Center in New York. A member of numerous professional societies and organizations, Dr. Curreri is a former President of the American Burn Association, the Society of University Surgeons, the Halstead Society, and the American Association for the Surgery of Trauma. Author of numerous articles on surgery, Dr. Curreri is a consultant to and member of the editorial boards of several major surgical and burn care journals. He is past Editor-in-Chief of *The American Surgeon*. Dr. Curreri has been a frequent adviser to the National Institutes of Health and was a member of the Institute's Surgery, Anesthesia, and Trauma Study Section from 1980 to 1984, and served as Chairman from 1986 to 1988. He is a member of the American Board of Surgery and is a former member of the Executive Committee of the Board of Governors of the American College of Surgeons, where he was Secretary from 1987 to 1989. Dr. Curreri received his medical degree from the University of Pennsylvania and completed his surgical residency at the Hospital of the University of Pennsylvania.

KAREN DAVIS

Karen Davis, Ph.D., is Chairman of the Department of Health Policy and Management in the School of Hygiene and Public Health, with a joint appointment as Professor of Economics at Johns Hopkins University. Positions previously held by Dr. Davis include Deputy Assistant Secretary for Planning and Evaluation/Health, U.S. Department of Health and Human Services; Administrator of the Health Resources Administration, U.S. Public Health Service; Senior Fellow at the Brookings Institution; Visiting Lecturer, Harvard University; and Assistant Professor, Rice University. She also served as Director of The Commonwealth Fund Commission on Elderly People Living Alone and was a member of the Maryland Governor's Commission on Health Care Policy and Financing. Dr. Davis is a member of the Institute of Medicine of the National Academy of Sciences; the Kaiser Commission on the Future of Medicaid; the U.S. General Accounting Office Comptroller General's Health Advisory Committee; and is a Senior Fellow, Brookdale National Fellowship. Dr. Davis also sits on several boards and committees concerned with health policy issues, and is the author of numerous books and articles on health economics and policy analysis including *Health Care Cost Containment; Medicare Policy: New Directions for Health and Long Term Care; Health and the War on Poverty: A Ten Year Appraisal; and National Health Insurance: Benefits, Costs and Consequences.* Dr. Davis received her Ph.D. in economics from Rice University.

JOHN M. EISENBERG

John M. Eisenberg, M.D., M.B.A., is Chairman of the Department of Medicine, Physician-in-Chief, and Anton and Margaret Fuisz Professor of Medicine at Georgetown University Medical Center. He is a graduate of the Washington University School of Medicine, St. Louis. After his residency in internal medicine at the Hospital of the University of Pennsylvania, Dr. Eisenberg was a Robert Wood Johnson Foundation Clinical Scholar and earned a master of business administration degree at the Wharton School. He served as Chief of the Division of General Internal Medicine at the University of Pennsylvania from 1978 to 1992, where he was Sol Katz Professor of General Internal Medicine. A member of numerous professional societies and organizations, including the Institute of Medicine of the National Academy of Sciences and the Association of American Physicians, Dr. Eisenberg is currently President of the Association for Health Services Research and on the Board of Directors of the American Board of Internal Medicine. He is also a member of the Health and Public Policy Committee of the American College of Physicians, has served on the College's Board of Regents, and was coeditor of the General Internal Medicine component of the College's Medical Knowledge Self-Assessment Program VIII. Dr. Eisenberg has been a consultant to and member of the editorial boards of several major medical and health policy journals. He is the author of *Doctors' Decisions and the Cost of Medical Care,* and has published numerous articles and chapters on topics such as physician practice, test use and efficacy, medical education, and clinical economics.

JACK GUILDROY

Jack Guildroy is a member of the Board of Directors of the American Association of Retired Persons (AARP). He has served as Chairman of AARP's New York State Legislative Committee and on the Association's National Legislative Council. An educator for 37 years until his retirement in 1978, Mr. Guildroy taught mathematics and social studies in secondary schools in New York and Massachusetts. Most of his career was devoted to counseling students at the high school level. A co-founder of the New York State Counselors Association, he also worked actively with the College Board and its Committee on Guidance, and has written articles on the ethical-legal problems of counselors in the *College Board*

Review. He helped establish the Retired Educators Chapter of the Great Neck Teachers Association, and is a board member of the Friends and Relatives of the Institutionalized Aged, Inc. Mr. Guildroy received his bachelor's degree in mathematics and his master's degree in history from the University of Rochester. He has a permanent certificate in counseling from Columbia University Teachers College and has taken graduate studies at New York University and the New School for Social Research.

ROBERT B. KELLER

Robert B. Keller, M.D., is an orthopedic surgeon practicing in Belfast, Maine. He is Executive Director of the Maine Medical Assessment Foundation, a health services research organization in Maine that deals with issues of variations of practice patterns, physician feedback and behavior change, and outcomes research. Dr. Keller received his medical degree from Cornell Medical School. After serving in the U.S. Navy, he undertook training in orthopedics in the Harvard University Combined Residency Program. He is an Associate Professor of Orthopeadic Surgery at the University of Massachusetts Medical School and Adjunct Professor of Community and Family Medicine and Surgery at Dartmouth Medical School. A member of numerous professional societies, he serves on several committees of the American Academy of Orthopaedic Surgeons and chairs the Committee on Outcomes. He has contributed several articles and chapters on the subject of small area analysis and physician feedback and is a co-investigator of a medical effectiveness/outcomes research team evaluating low back pain and surgical outcomes. He has served as President of the Maine Medical Association, and was a member of the Board of Directors of Medical Mutual Insurance Company of Maine.

WALTER B. MAHER

Walter B. Maher is the Director of Federal Relations for Chrysler Corporation. He is responsible for the development and promotion of legislation that carries forth Chrysler's human resources objectives. Mr. Maher is particularly involved in the advancement of programs and policies that would assist businesses in controlling health care costs. He has been with Chrysler since receiving his L.L.B. from Georgetown University in 1963. Prior to his current position, he served as Director of Employee Benefits at Chrysler. Mr. Maher is on the Board of Directors of the Washington Business Group on Health and is actively involved with the National Leadership Coalition for Health Care Reform. He is also a member of the National Academy of Social Insurance and served on the Labor and Employee Benefits Committee of the U.S. Chamber of Commerce and on the Employee Benefits Committee of the National Association of Manufacturers. He was Co-chairperson of the Governor's Task Force on Access to Health Care for the state of Michigan and was a member of the Institute of Medicine's Council on Health Care Technology.

THOMAS R. REARDON

Thomas R. Reardon, M.D., currently serves on the American Medical Association (AMA) Board of Trustees. In addition to his activities in organized medicine at the county, state, and national level, Dr. Reardon has maintained a busy general practice in Portland, Oregon for 28 years. Prior to being elected to the Board of Trustees, Dr. Reardon represented the Hospital Medical Staff Section in the AMA House of Delegates and served on the AMA Task Force on Physician Manpower. Dr. Reardon began his activities in medical politics with the Multnomah County Medical Society, where he was President from 1980 to 1981. He later held the office of Vice President and then President of the Oregon Medical Association (OMA). He served as Chairman of the OMA Committee on Private Practice and Hospital Relations and the Committee on Health Planning. He was also a member of the OMA Legislative Committee and Board of Censors and Ethics Committee. In addition to his involvement with organized medicine, Dr. Reardon has served on various community-based task forces to study health care for the medically indigent. He is active in issues affecting the elderly and participated on Congressman Ron Wyden's task force on Medicare reimbursement. Dr. Reardon received his medical degree from the University of Colorado School of Medicine.

UWE E. REINHARDT

Uwe E. Reinhardt, Ph.D., is James Madison Professor of Political Economy at Princeton University, where he has been teaching since 1968. Professor Reinhardt was a member of the National Leadership Commission on Health. He has served on several councils and task forces, such as the Governing Council of the Institute of Medicine of the National Academy of Sciences; the National Health Care Technology Council of the Department of Health, Education, and Welfare; and the Veterans Administration's Special Medical Advisory Group. He also served as President of the Association for Health Services Research and on the editorial boards of a number of major health policy and economic journals. Professor Reinhardt is the author of *Physician Productivity and the Demand for Health Manpower* and numerous articles on health economics, accounting, and corporate finance. These works include a financial analysis of the Lockheed L-1011 Tri-Star, a cost-benefit analysis of the Space Shuttle project, and pricing strategies for the space shuttle. Dr. Reinhardt's consulting activities have included work for the U.S. Department of Health and Human Services, Mathematica Policy Research, the Urban Institute, and Econ Incorporated. He has been a consultant in management training, primarily in managerial economics and corporate finance, for several major corporations. He received his Ph.D. in economics from Yale University and an honorary doctorate from the Medical College of Pennsylvania in 1987.

PAUL B. GINSBURG, Ph.D., is the Executive Director. He has long and varied experience with a wide range of health care financing issues, including physician payment, hospital payment, health insurance, and alternative delivery systems. He has written numerous scholarly articles and books on health care policy. Prior to joining the Commission at its inception in 1986, Dr. Ginsburg was a Senior Economist at the RAND Corporation. He was Deputy Assistant Director for Income Security and Health at the Congressional Budget Office, where he prepared analyses for the Congress on federal health policy issues with significant budgetary implications. Dr. Ginsburg has served on the faculties of Duke University and Michigan State University. He earned a doctorate in economics at Harvard University in 1971.

LAUREN B. LeROY, Ph.D., is the Deputy Director. Before coming to the Commission, Dr. LeRoy served as Associate Director of The Commonwealth Fund Commission on Elderly People Living Alone. Prior to that, she was Assistant Director of the Institute for Health Policy Studies, University of California, San Francisco, and the Director of the Institute's Washington office. She also served as an analyst working on health care financing legislation in the Department of Health, Education, and Welfare. Dr. LeRoy's research interests and published work have focused on physician payment reform, physician training and practice, the nurse labor market, and health care for the elderly. She received her doctorate in social policy planning from the University of California, Berkeley.

DAVID C. COLBY, Ph.D., is a Principal Policy Analyst. He received his doctorate in political science from the University of Illinois. Previously, he held faculty and administrative positions at Williams College and the University of Maryland, Baltimore County. From 1986 to 1987, he was a Robert Wood Johnson Health Finance Fellow. At the Commission, he has developed simulations to estimate Medicare Fee Schedule payments and to study the impact of the fee schedule on physicians and beneficiaries. He is currently analyzing physician payments and access under Medicaid. In addition to his analytical and research responsibilities, he is a member of the Commission Staff Executive Committee.

DON COX, Ph.D., is a Senior Analyst. He received a doctorate in economics from the University of Maryland. Prior to joining the Commission, Dr. Cox was a Senior Economist at the Federal Trade Commission and Fu Associates, Ltd. In addition, he has worked in the Occupational Safety and Health Administration and the Department of Defense. His work at the Commission involves analyses underlying the Commission's recommendations on annual Medicare Fee Updates and Volume Performance Standards, and preparation of the Commission's reports to Congress on these issues.

TERESA DeCARO is an Analyst. She holds a master of science degree with advanced certification in health and public policy from the University of Maryland. While at the University, she was involved in curriculum evaluation, student development, and long-term strategic planning for the School of Nursing. She is a registered nurse with 10 years of experience in caring for the critically ill and elderly. Previously, she founded and chaired an advocacy group for reform of state and local child care policies. Her work at the Commission has focused on refinement of the scale of relative work for the Medicare Fee Schedule and payments for radiology and trauma surgery.

ANNETTE BERGSTROM HENNESSEY is the Executive Assistant. She received her bachelor's degree in political science from Mississippi State University in Starkville. Until joining the Commission, she worked for Senator Bill Bradley as a Legislative Secretary primarily responsible for administration of his legislative staff. As Assistant to the Executive and Deputy Directors, she coordinates all ongoing Commission activities.

JOHN F. HOADLEY, Ph.D., is a Senior Analyst. He received his doctorate in political science from the University of North Carolina at Chapel Hill in 1979. Before joining the Commission staff, Dr. Hoadley was a Senior Research Associate at the National Health Policy Forum, where he was responsible for Forum sessions on health insurance, access, quality of care, and physician payment, among other issues. Previously, he served as a Legislative Assistant in the office of Representative Barbara B. Kennelly, and was an American Political Science Association Congressional Fellow in 1983-84. Earlier, Dr. Hoadley taught political science at Duke University and at the State University of New York at Stony Brook. His work at the Commission focuses on issues related to managing care and refinement of the Medicare Fee Schedule.

CHRISTOPHER HOGAN, Ph.D., is a Senior Analyst. He holds a doctorate in economics from Northwestern University. Before joining the Commission staff he worked at the National Center for Health Services Research and served as Senior Economist with the Consolidated Consulting Group. Joining the staff in 1989, he developed the Commission's Volume Performance Standard report and its analysis of the fee schedule conversion factor. He is currently working to find ways to monitor Medicare beneficiaries' access to care under the fee schedule.

ROZ DIANE LASKER, M.D., is a Principal Policy Analyst. She received her medical degree from the University of Pittsburgh School of Medicine. Following her residency training in internal medicine, she completed a fellowship in endocrinology and metabolism at the National Institutes of Health. Dr. Lasker was previously on the faculty at the University of Vermont College of Medicine and has published numerous articles in basic and clinical endocrinology. Since joining the Commission in 1987, she has combined research, analysis, and consensus processes to address policy issues related to the development of a resource-based fee schedule for Medicare. Her most recent work focuses on profiling and practice guidelines. In addition to her analytic and research responsibilities, Dr. Lasker is a member of the Commission Staff Executive Committee.

SHERAN ESTES McMANUS is the Administrative Officer. Having received her bachelor's degree from the University of Maryland, she continued her studies at the George Washington University. She has more than 15 years of experience in program administration and management, primarily in programs dealing with health care issues. She was previously Executive Associate of the George Washington University's National Health Policy Forum and served in various capacities at the U.S. Department of Health and Human Services. At the Commission, she is responsible for all financial management and administration. She also oversees the production of all Commission publications.

KATIE MERRELL is a Senior Analyst with a background in mathematics and economics. She also spends a portion of her time as the Director of the Health Studies Initiative, Division of Biological Sciences and Pritzker School of Medicine, University of Chicago. Prior to joining the Commission staff, she worked at Abt Associates for five years, where she was involved in a variety of projects including the cost effectiveness of the Medicare hospice benefit and the dynamics of participation in the Special Supplemental Food Program for Women, Infants, and Children (WIC). She was also a Research Assistant at the Board of Governors of the Federal Reserve System. In addition, Ms. Merrell taught junior and senior high school mathematics and computer science and has taught algebra part-time at the University of the District of Columbia. She is currently working on physician practice expenses.

ERNEST MOY, M.D., M.P.H., is Visiting Scholar. He received his medical degree from New York University School of Medicine. After completing his residency in internal medicine at the Hospital of the University of Pennsylvania, he earned a master's degree in public health from Columbia University, School of Public Health. He is currently an Instructor of Clinical Medicine in the Department of Medicine at Columbia University. Dr. Moy comes to the Commission as a Faculty Fellow in the Robert Wood Johnson Fellowship in Health Care Finance. His work at the Commission centers on monitoring beneficiaries' access to services after the implementation of the Medicare Fee Schedule.

PETER I. OPPENHEIM is a Junior Analyst. He is on a one-year leave of absence from the University of California, Los Angeles School of Medicine, and will receive his medical degree in May 1993. His work at the Commission focuses on medical malpractice reform and physician supply, distribution, and graduate medical education.

VICKY L. PEBSWORTH is an Analyst. She attended the master's program in health services research at the School of Public Health, University of California, Los Angeles. As a registered nurse for 15 years, she worked in cardiac surgical intensive care and then owned and managed a home health agency. Previously, she was the Medical Administrator for New Mexico's Medicaid waiver programs. Her work at the Commission has centered on refinement of the scale of relative work, evaluation of Phase II of the Hsiao study, and practice guidelines.

ANNE SCHWARTZ is a Senior Analyst. She holds a master's degree in health policy and finance from Johns Hopkins University. Previously, she worked as staff in the U.S. House of Representatives for the Select Committee on Children, Youth, and Families and for Representative Claudine Schneider, where her work involved health, education, and child care issues. Her work at the Commission has focused on graduate medical education and physician supply, physician payment under Medicaid, and beneficiary issues.

DAVID W. SHAPIRO, M.D., J.D., is a Senior Analyst. He received his medical degree from the University of California, Los Angeles (UCLA) School of Medicine and his law degree from Yale Law School. After completing a residency in primary care internal medicine at UCLA, he was a Veterans Administration/Robert Wood Johnson Clinical Scholar. At the Commission, he has been working on medical malpractice reform, practice guidelines, the use of profiling for quality improvement and utilization review, and payments for electrocardiograms.

JENNIFER I. SMITH is a Junior Analyst. She received her bachelor's degree in history and sociology of science from the University of Pennsylvania. Previously, she worked for the Pediatric Physicians' Faculty Practice Plan, Children's Hospital of Philadelphia. Her work at the Commission focuses on beneficiary issues and analyses of Medicare data.

ANTHONY M. TUCKER is an Analyst. He holds a master's degree in public administration from the Kennedy School of Government, Harvard University. He has a 17-year background in administrative and research information systems use and development. He also has worked for more than eight years in the area of health care policy and program operations research with an emphasis on managed care, first with Mathematica Policy Research, and then with the Group Health Association of America. His focus at the Commission includes capitation and related managed-care issues, physician practice profiling, and developing a data strategy for cost containment and quality assurance.

SUSAN WALL is an Analyst. She received a bachelor of science degree in public health from the University of North Carolina at Chapel Hill. Her work at the Commission centers on access to physician services in rural and urban underserved areas.

ACRONYMS

AAPCC	Average Adjusted Per Capita Cost
ABMS	American Board of Medical Specialties
ACE	Accelerated-Compensation Event
ACGME	Accreditation Council on Graduate Medical Education
ADR	Alternative Dispute Resolution
AHCCCS	Arizona Health Care Cost Containment System
AHCPR	Agency for Health Care Policy and Research, HHS
AHEC	Area Health Education Center
AHPB	Adjusted Historical Payment Basis
AIDS	Acquired Immune Deficiency Syndrome
AMA	American Medical Association
ARF	Area Resource File
ASA	American Society of Anesthesiologists
BDMS	Bureau of Data Management and Strategy, HCFA, HHS
BHPr	Bureau of Health Professions, HRSA, HHS
BMAD	Part B Medicare Annual Data Files
CABG	Coronary Artery Bypass Graft
CBO	Congressional Budget Office
CBS	Current Beneficiary Survey
CF	Conversion Factor
CHMIS	Community Health Management Information System
CMD	Carrier Medical Director
CME	Continuing Medical Education
C/MHC	Community and Migrant Health Center
COGME	Council on Graduate Medical Education, HHS
COTH	Council on Teaching Hospitals
CPR	Customary, Prevailing, and Reasonable
CPT	Current Procedural Terminology
CQI	Continuous Quality Improvement
CRNA	Certified Registered Nurse Anesthetist
CRS	Congressional Research Service
CWF	Common Working File
DO	Doctor of Osteopathy
DRG	Diagnosis-Related Group
EEG	Electroencephalogram
EKG	Electrocardiogram

EM	Evaluation and Management
EOMB	Explanation of Medicare Benefits Form
EPO	Exclusive Provider Organization
EPSDT	Early Periodic Screening, Diagnosis, and Treatment
FEHBP	Federal Employees Health Benefit Program
FFS	Fee for Service
FMG	Foreign Medical Graduate
FQHC	Federally Qualified Health Center
FTE	Full-Time Equivalent
FY	Fiscal Year
GAF	Geographic Adjustment Factor
GAO	U.S. General Accounting Office
GDP	Gross Domestic Product
GHA	Group Health Association
GHAA	Group Health Association of America
GHC	Group Health Cooperative of Puget Sound
GME	Graduate Medical Education
GMENAC	Graduate Medical Education National Advisory Committee
GNP	Gross National Product
GPCI	Geographic Practice Cost Index
HCFA	Health Care Financing Administration, HHS
HCPCS	HCFA Common Procedure Coding System
HEAL	Health Education Assistance Loan
HHS	U.S. Department of Health and Human Services
HI	Hospital Insurance Program (Medicare Part A)
HIAA	Health Insurance Association of America
HIO	Health Insuring Organization
HIP	Health Insurance Plan of New York
HIS	Health Interview Survey
HMO	Health Maintenance Organization
HPEAA	Health Professions Educational Assistance Act of 1963
HPSA	Health Professional Shortage Area
HRSA	Health Resources and Services Administration, HHS
HSQB	Health Standards and Quality Bureau, HCFA, HHS
ICD-9	International Classification of Diseases—Ninth Edition
IMG	International Medical Graduate
IOM	Institute of Medicine
IPA	Independent Practice Association
JCAHO	Joint Commission on the Accreditation of Healthcare Organizations
MAAC	Maximum Allowable Actual Charge
MEDTEP	Medical Treatment Effectiveness Program
MEI	Medicare Economic Index

MGMA	Medical Group Management Association
MSA	Metropolitan Statistical Area
NAHDO	National Association of Health Data Organizations
NAHMOR	National Association of Health Maintenance Organization Regulators
NAIC	National Association of Insurance Commissioners
NAMCS	National Ambulatory Medical Care Survey
NCH	National Claims History File System
NCHS	National Center for Health Statistics, HHS
NCQA	National Committee for Quality Assurance
NCVHS	National Committee on Vital and Health Statistics, HHS
NEIC	National Electronic Information Corporation
NGA	National Governors' Association
NHDS	National Hospital Discharge Survey
NHSC	National Health Service Corps
NLM	National Library of Medicine, HHS
NP	Nurse Practitioner
NPP	Nonphysician Practitioner
NPRM	Notice of Proposed Rule Making
OACT	Office of the Actuary, HCFA, HHS
OIG	Office of the Inspector General, HHS
OPD	Outpatient Department
OPHC	Office of Prepaid Health Care, HCFA, HHS
OSDM	Office of Statistics and Data Management, BDMS, HCFA, HHS
OTA	Office of Technology Assessment, U.S. Congress
PA	Physician Assistant
PA/QI	Practice Assessment and Quality Improvement
PAR	Participating Physician and Supplier Program
PCCM	Primary Care Case Management
PHP	Prepaid Health Plan
PHS	U.S. Public Health Service, HHS
PLI	Professional Liability Insurance
PORT	Patient Outcomes Research Team
POS	Point of Service
PPO	Preferred Provider Organization
PPRC	Physician Payment Review Commission
PPS	Prospective Payment System
PRO	Peer Review Organization
ProPAC	Prospective Payment Assessment Commission
QA	Quality Assurance
QARI	Quality Assurance Reform Initiative
QMB	Qualified Medicare Beneficiary
RBRVS	Resource-Based Relative Value Scale

RFS	Radiologists' Fee Schedule
RRC	Residency Review Committee
RV	Relative Value
RVS	Relative Value Scale
RVU	Relative Value Unit
RWV	Relative Work Value
SMI	Supplementary Medical Insurance Program (Medicare Part B)
SSI	Supplemental Security Income
TURP	Trans-Urethral Resection of the Prostate
UCDS	Uniform Clinical Data Set
UI	Urban Institute
VPS	Volume Performance Standard

LEGISLATION (Listed Chronologically)

HMO Act	Health Maintenance Organization Act of 1973, P.L. 93-222, enacted December 29, 1973.
TEFRA	Tax Equity and Fiscal Responsibility Act of 1982, P.L. 97-248, enacted September 3, 1982.
DEFRA	Deficit Reduction Act of 1984, P.L. 98-369, enacted July 18, 1984.
COBRA	Consolidated Omnibus Budget Reconciliation Act of 1985, P.L. 99-272, enacted April 7, 1986.
OBRA86	Omnibus Budget Reconciliation Act of 1986, P.L. 99-509, enacted October 21, 1986.
OBRA87	Omnibus Budget Reconciliation Act of 1987, P.L. 100-203, enacted December 21, 1987.
MCCA	Medicare Catastrophic Coverage Act of 1988, P.L. 100-360, enacted July 1, 1988, repealed December 13, 1989.
OBRA89	Omnibus Budget Reconciliation Act of 1989, P.L. 101-239, enacted December 19, 1989.
OBRA90	Omnibus Budget Reconciliation Act of 1990, P.L. 101-508, enacted November 3, 1990.

TERMS

Accelerated-Compensation Event (ACE): A class of medically caused injuries determined by experts to be normally avoidable if patients are given good care. Proposed as an alternative standard of liability for medical malpractice. A patient would receive compensation if an ACE occurred, without determining whether fault or negligence was involved in that particular case. See Alternative Dispute Resolution.

Access: The ability to obtain needed medical care.

Adjusted Average Per Capita Cost (AAPCC): An estimate of the average per capita cost incurred by Medicare per beneficiary in the fee-for-service system, adjusted by county for differences in age, sex, disability status, Medicaid eligibility, and institutional status.

Adjusted Historical Payment Basis (AHPB): The average payment for a service in a locality in 1991.

Aging (Data): The process of estimating frequencies and payment rates by applying changes in law and regulations to data from an earlier year.

Alternative Dispute Resolution (ADR): An approach to determining fault and providing compensation outside of the traditional tort system. See Accelerated-Compensation Event, Arbitration, Tort Reform.

Arbitration: A system of conflict resolution that uses an impartial third party to resolve disputes. Decisions of the arbitrator can be either binding or voluntary. See Alternative Dispute Resolution.

Assignment (Medicare): A beneficiary's directive to Medicare to pay benefits directly to the physician or supplier. Medicare will do this only if the physician accepts Medicare's allowed charge as payment in full (guarantees not to balance bill). See Balance Bill, Nonparticipating Physician, Participating Physician and Supplier Program.

Assistant-at-Surgery: An individual who has the necessary qualifications to participate in a particular operation and actively assists in performing the surgery. Medicare will pay for the service only when performed by a physician or a physician assistant.

Balance Bill: A physician's charge exceeding the Medicare-allowed charge.

Baseline Adjustment: An adjustment made for anticipated increases in service volume and intensity in response to changes in fees under the Medicare Fee Schedule in order to maintain budget neutrality in 1992.

Beneficiary: A person eligible for benefits under an insurance plan. Under Part B of Medicare, Americans over 65, many disabled individuals, and certain individuals with end-stage renal disease can become beneficiaries by paying a monthly premium.

Bundling: The use of a single payment for a group of related services. For an example of bundling, see Global Surgery Policy.

Capitation: A health insurance payment mechanism in which a fixed amount is paid per person to cover services over a period of time; a fixed, per capita payment.

Carrier (Medicare): A private contractor that administers claims processing and payment for Part B services. See Part B (Medicare).

Clinical Target: A clinical sign, symptom, or physiologic parameter that responds to medical treatment and is highly correlated with achieving the ultimate patient outcome intended by a practice guideline.

Coding: A mechanism for identifying and defining physicians' services.

Coinsurance: The percentage of the balance of covered medical expenses that a beneficiary must pay after payment of the deductible. Under Medicare Part B, the beneficiary pays coinsurance of 20 percent of allowed charges. See Copayment, Deductible.

Common Working File (CWF): A HCFA data reporting system that combines both Part A and Part B claims in a common file. The CWF became fully operational in 1991. Also known as the National Claims History File.

Concurrent Care: A circumstance in which nonconsultative services are rendered by more than one physician during a given period of time.

Convener Function: A structured group process in which members of a health care delivery system are brought together to interpret data on processes and outcomes of care and to plan how to change and monitor their future practices. A productive way to use information on profiling. See Profiling.

Conversion Factor: The multiplicative factor applied to the relative value scale to produce a schedule of dollar amounts of payment for physicians.

Copayment: The sum of coinsurance and deductibles. Alternatively, a fixed dollar amount per service that is the responsibility of the beneficiary. See Coinsurance, Deductible.

Cost Sharing: The portion of payment for health expenses that the beneficiary must pay, including copayments (deductibles and coinsurance) and balance bills. See Balance Bill, Coinsurance, Copayment, Deductible.

Cost Shifting: A situation in which a health care provider compensates for the effect of decreased revenue from one payer by increasing charges to another payer.

Crosswalk: The assumed relationship between discontinued CPT codes and those new codes that replace them.

Current Procedural Terminology (CPT): The coding system for physicians' services developed by the American Medical Association; basis of the HCPCS coding system for physicians' services. See Coding, HCFA Common Procedures Coding System.

Customary Charge: One of the screens previously used to determine a physician's payment for a service under Medicare's customary, prevailing, and reasonable payment system. Customary charges were calculated as the physician's median charge for a given service over a prior 12-month period. See Customary, Prevailing, and Reasonable.

Customary, Prevailing, and Reasonable (CPR): The method of paying physicians under Medicare from 1965 until implementation of the Medicare Fee Schedule in January 1992. Payment for a service was limited to the lowest of (1) the physician's billed charge for the service, (2) the physician's customary charge for the service, or (3) the prevailing charge for that service in the community. Similar to the usual, customary, and reasonable system used by private insurers. See Customary Charge, Medicare Fee Schedule, Prevailing Charge.

Deductible: A specified amount of covered medical expenses that a beneficiary must pay before receiving benefits. In 1992, Medicare Part B has an annual deductible of $100.

Diagnosis-Related Groups (DRGs): A system of classifying patients on the basis of diagnoses for purposes of payment to hospitals. See Prospective Payment System.

Diagnostic Guideline: A practice guideline targeted at evaluating patients with particular symptoms for the presence of diseases that would benefit from intervention. They are also used to guide the screening of asymptomatic patient populations for early stages of disease. See Management Guideline, Practice Guideline, Service Guideline.

Direct Costs: The labor, supply, and equipment costs directly attributable to the provision of a specific service. See Indirect Costs.

Dual Eligible: A Medicare beneficiary who also receives the full range of Medicaid benefits offered in his or her state.

Enterprise Liability: A proposal that would make hospitals and other health care facilities legally and financially liable for all negligent injuries caused by their medical staffs.

Evaluation and Management Service: A nontechnical service provided by most physicians for the purpose of diagnosing and treating diseases and counseling and evaluating patients.

Exclusive Provider Organization (EPO): A variation on the Preferred Provider Organization model, EPOs restrict enrollees to a panel of preferred providers. Services rendered by non-plan providers are not reimbursed. See Preferred Provider Organization.

Experience Rating (Professional Liability Insurance): A system used by liability insurance carriers to set premium levels based on the insured's past liability experience.

Federally Qualified HMO: An HMO that has satisfied certain federal qualifications pertaining to organizational structure, provider contracts, health service delivery information, utilization review/quality assurance, grievance procedures, financial status, and marketing information.

Fee for Service: A system of paying physicians for individual medical services rendered, as opposed to paying them salaries or capitation payments. The CPR payment system and the Medicare Fee Schedule are examples of fee for service payment methods.

Fee Schedule: A list of predetermined payments for units of medical service. See Medicare Fee Schedule.

Fee Schedule Payment Area: A geographic area within which payment for a given service under the Medicare Fee Schedule will be equal. Most payment areas are analogous to payment localities under the previous CPR system. See Geographic Adjustment Factor Locality.

Final Rule: The regulations published by HCFA on November 25, 1991, that govern the Medicare Fee Schedule implemented on January 1, 1992. See Medicare Fee Schedule.

Foreign Medical Graduate (FMG): See International Medical Graduate.

Gaming: Gaining advantage by using improper means to evade the letter or intent of a rule or system.

General Deterrence: A theoretical incentive, rendered by the threat of legal liability, to improve the quality of medical care.

Geographic Adjustment Factor (GAF): The adjuster applied to a service's fee in the Medicare Fee Schedule to determine the correct payment in each fee schedule payment area. As defined in OBRA89, the geographic adjustment factor for a service is created by combining three separate adjustment factors, one for each component of the Medicare Fee Schedule: physician work, practice expense, and malpractice expense. The adjustment factors for physician work, practice expense, and malpractice expense are based on the same measures that underlie the GPCI. See Fee Schedule Payment Areas, Geographic Practice Cost Index, Medicare Fee Schedule.

Geographic Practice Cost Index (GPCI): An index summarizing the prices of inputs to physicians' services in an area relative to national average prices. The GPCI, originally defined by the Urban Institute and the Center for Health Economics Research, is based on three components which reflect the opportunity cost of physician work, the cost of goods and services that comprise practice expenses, and malpractice expenses. The GPCI is a single measure that combines these three components as fixed shares, whereas the GAF of the Medicare Fee Schedule allows each service to reflect different shares, creating a GAF for each service. See Geographic Adjustment Factor.

Global Service: A package of clinically related services treated as a unit for purposes of billing, coding, or payment.

Global Surgery Policy: The payment policy in the Medicare Fee Schedule stating that the global surgical fee includes not only the procedure itself but also all related services and visits that occur within a designated time period. Separate payment is permitted for the initial evaluation, services for unrelated problems, and return trips to the operating room for complications. See Surgical Global Services.

Graduate Medical Education: The period of medical training that follows graduation from medical school; commonly referred to as internship, residency, and fellowship training.

Group HMO: An HMO that pays a medical group a negotiated, per capita rate, which the group distributes among its physicians, usually on a salaried arrangement. See Health Maintenance Organization, Independent Practice Association, Network HMO, Staff HMO.

HCFA Common Procedure Coding System (HCPCS): A coding system based on CPT, but supplemented with additional codes; required for coding by Medicare carriers. See Coding and Current Procedural Terminology.

Health Maintenance Organization (HMO): A prepaid, organized health care plan. Individuals are enrolled in the plan, and services are provided through a system of affiliated providers. Comprehensive benefits are financed by prepaid premiums with limited copayments. See Group HMO, Independent Practice Association, Network HMO, Staff HMO.

Health Professional Shortage Area (HPSA): An urban or rural geographic area, a population group, or a public nonprofit private medical facility that is determined by the Secretary of Health and Human Services to have a shortage of health professionals. HPSAs are eligible for National Health Service Corps personnel, and physicians who provide services in HPSAs qualify for the Medicare bonus payment. Replaces Health Manpower Shortage Area (HMSA).

Independent Practice Association (IPA): An HMO that contracts with individual physicians to provide services to HMO members at a negotiated per capita or fee-for-service rate. Physicians maintain their own offices and can contract with other HMOs and see other fee-for-service patients. See Group HMO, Health Maintenance Organization, Network HMO, Staff HMO.

Indirect Costs: Those costs that cannot be easily traced to particular services, but which must be assigned using explicit accounting methods. Sometimes referred to as common or overhead costs. See Direct Costs.

Intensivist: A physician who is an expert in the management of critically ill patients.

International Medical Graduate (IMG): A graduate of a medical school outside of the U.S. or Canada; previously referred to as a foreign medical graduate (FMG).

Limiting Charge: The maximum amount that a nonparticipating physician is permitted to charge for a service; a limit on balance billing. Starting in 1993 the limiting charge will be a flat percentage of the Medicare Fee Schedule amount paid to nonparticipating physicians. See Balance Bill.

Locality (Medicare): See Fee Schedule Payment Area.

Malpractice Expense: The cost of professional liability insurance incurred by physicians. A component of the Medicare relative value scale.

Management Guideline: A practice guideline that covers the evaluation and management of patients who are known to have a particular condition. Examples are guidelines dealing with low back pain or benign prostatic hypertrophy. See Diagnostic Guideline, Practice Guideline, Service Guideline.

Maximum Allowable Actual Charge (MAAC): Transitional limits, specified by OBRA86 and based on actual charges in 1984, on what nonparticipating physicians could charge Medicare patients. MAACs are being phased out. In 1992, they are effective only if they were used to determine a physician's 1991 limiting charge. They will be discontinued in 1993.

Medicaid: A joint federal-state program of federal matching grants to the states to provide health insurance for categories of the poor and medically indigent. States determine eligibility, payments, and benefits consistent with federal standards.

Medicare Adjuster: A proposed adjustment to a service's relative work value to reflect accurately reflect the difference in work involved in treating elderly patients.

Medicare Bonus Payment: An additional 10 percent payment to the physician above the allowed charge for services delivered to Medicare beneficiaries in designated Health Professional Shortage Areas.

Medicare Economic Index (MEI): An index that tracks changes over time in physician practice costs and general earnings levels. From 1975 through 1991, increases in prevailing charge screens were limited to increases in the MEI. See Prevailing Charge.

Medicare Fee Schedule: The resource-based fee schedule currently used by Medicare to pay for physicians' services.

Medigap Insurance: Private health insurance policies designed to supplement Medicare coverage. Benefits may include payment of Medicare deductibles, coinsurance, and balance bills, and payment for services not covered by Medicare.

Negligence: A legal finding that an injury was caused by failure to give such reasonable care as physicians ordinarily would provide. The current standard by which medical malpractice cases are decided in the court system.

Network HMO: An HMO where the plan contracts with two or more independent group practices to provide services and pays a fixed monthly fee per member. The group decides how the fees will be distributed to individual physicians. See Health Maintenance Organization.

Nonparticipating Physician: A physician who does not sign a participation agreement and, therefore, is not obligated to accept assignment on all Medicare claims. See Participating Physician, Participating Physician and Supplier Program.

Nonphysician Practitioner (NPP): A health care provider, such as a physician assistants, clinical psychologist, nurse midwife, clinical social worker, certified nurse anesthetists, and nurse practitioner, whose services can be billed under the Medicare program on a fee-for-service basis.

Outcome: The consequence of a medical intervention on a patient.

Outcomes and Effectiveness Research: Medical or health services research that attempts to identify the clinical outcomes (including mortality, morbidity, and functional status) of the delivery of health care.

Overvalued Procedure: A procedure for which the payment rate has been reduced because it was identified by the Congress as "overvalued" under the customary, prevailing, and reasonable payment system.

Paid Amount: The portion of a submitted charge that is actually paid, by both third-party payers and the insured, including copayments and balance bills. See Submitted Charge.

Part A (Medicare): The Hospital Insurance program, which covers the cost of hospital and related post-hospital services. Eligibility is normally based on prior payment of payroll taxes. Beneficiaries are responsible for an initial deductible per spell of illness and copayments for some services.

Part B (Medicare): The Supplementary Medical Insurance program, which covers the costs of physician services, outpatient laboratory and X-ray tests, durable medical equipment, outpatient hospital care, and certain other services. Part B requires payment of a monthly premium, which covers roughly 25 percent of program costs. Beneficiaries are responsible for a deductible and coinsurance payment for most covered services. See Beneficiary.

Participating Physician: A physician who signs a participation agreement, agreeing to accept assignment on all Medicare claims for one year.

Participating Physician and Supplier Program (PAR): A program that provides financial and administrative incentives for physicians and suppliers to agree in advance to accept assignment on all Medicare claims for a one-year period.

Peer Review Organization (PRO): An organization contracting with HCFA to review the medical necessity and the quality of care provided to Medicare beneficiaries; formally called Utilization and Quality Control Peer Review Organization.

Physician Work: A measure of the time, physical effort and skill, mental effort and judgment, and stress from iatrogenic risk.

Point-of-Service (POS) Plan: A hybrid model that combines features of both prepaid and indemnity insurance. Enrollees decide whether to use network or non-network providers at the time care is needed but are usually charged sizable copayments for selecting the latter. Variants include open-ended HMOs and triple-option plans. See Health Maintenance Organization, Network HMO, Preferred Provider Organization.

Practice Assessment and Quality Improvement (PA/QI) Program: An integrated injury prevention program, consisting of a self-assessment survey, a home study course, and a site visit that focuses on risk factors for avoidable injuries in the private practitioner's office setting.

Practice Expense: The cost of nonphysician resources incurred by the physician to provide services. Examples are salaries and fringe benefits received by nurses, physician assistants, and receptionists who are employed by the physician; and the expenses associated with purchase and use of medical equipment and supplies in the physician's office.

Practice Guideline: An explicit statement of what is known and believed about the benefits, risks, and costs of particular courses of medical action intended to achieve a meaningful difference in patient outcomes. See Diagnostic Guideline, Management Guideline, Service Guideline.

Preferred Provider Organization (PPO): A financing arrangement in which networks or panels of providers agree to furnish services and be paid on a negotiated fee schedule. Enrollees are offered a financial incentive to use doctors on the preferred list. See Exclusive Provider Organization, Health Maintenance Organization.

Premium: An amount paid periodically to purchase medical insurance benefits; for Medicare Part B services in 1992, beneficiaries pay a premium of $31.80 per month.

Prevailing Charge: One of the screens that determined a physician's payment for a service under the Medicare CPR payment system; it was the 75th percentile of customary charges, with annual updates limited by the MEI. See Customary Charge; Customary, Prevailing, and Reasonable; Medicare Fee Schedule.

Primary-Care-Sensitive Admission: A hospital admission that often might have been avoided through timely and adequate care. Typically refers to an admission for conditions where a lack of detection and management leads to more radical treatments. See Sentinel Event.

Procedure Coding: See Coding.

Procedure-Sensitive Admission: See Primary-Care-Sensitive Admission.

Professional Component: The part of a relative value or fee that represents the cost of a physician's interpretation of a diagnostic test or treatment planning for a therapeutic procedure. See Technical Component.

Professional Liability Insurance (PLI): The insurance physicians purchase to help protect themselves from the financial risks associated with malpractice claims.

Profiling: Expressing a provider's pattern of practice as a rate — some measure of utilization (costs or services) or outcome (functional status, morbidity, or mortality) aggregated over time for a defined population of patients under the provider's care — to compare to other practice patterns.

Prospective Payment System (PPS): The Medicare system used to pay hospitals for inpatient hospital services; based on the DRG classification system. See Diagnosis-Related Groups.

Relative Value (RV): A value that reflects a comparison to an arbitrary standard.

Relative Value Scale (RVS): An index that assigns weights to each medical service; the weights represent the relative amount to be paid for each service. The RVS used in the development of the Medicare Fee Schedule consists of three cost components: physician work, practice expense, and malpractice expense. See Malpractice Expense, Medicare Fee Schedule, Physician Work, Practice Expense.

Relative Work Value (RWV): An assigned value that reflects the average work of a physician of average efficiency relative to an arbitrary standard. See Relative Value Scale.

Resource-Based Relative Value Scale (RBRVS): A relative value scale that is based on the resources involved in providing a service. See Relative Value Scale.

Revenue Share: The proportion of a practice's total revenue devoted to a particular type of expense. For example, the practice expense revenue share is that proportion of revenue used to pay for practice expense.

Sentinel Event: An adverse health event that could have been avoided through appropriate care. An example would be hospitalization for uncontrolled hypertension that might have been avoided. See Primary-Care-Sensitive Admission.

Service Guideline: A type of practice guideline that presents the appropriate and inappropriate indications for the use of particular diagnostic and therapeutic procedures. See Diagnostic Guideline, Management Guideline, Practice Guideline.

Severity Modifier: An adjustment that reflects the effect of patient factors, such as severity of illness, comorbidity, risk of complications, and body site, on the relative work required to deliver a service.

Site-of-Service Differential: The difference in the amount paid when the same service is performed in different practice settings.

Specialty Differential: The difference in the relative value or amount paid for the same service when performed by physicians in different specialties.

Staff HMO: An HMO in which physicians practice solely as employees of the HMO and are paid a salary. See Group HMO, Health Maintenance Organization, Network HMO.

Submitted Charge: The actual charge submitted to the patient or a payer. See Paid Amounts.

Supplementary Medical Insurance Program (SMI): See Part B (Medicare).

Supplier: A provider of health care services, other than a practitioner, that is permitted to bill under Medicare Part B. Suppliers include independent laboratories, durable medical equipment providers, ambulance services, orthotists, prosthetists, and portable X-ray providers.

Surgical Global Service: A package of services that are clinically related to either major or minor surgical procedures. See Global Surgery Policy.

Technical Component: The part of a relative value or fee for a diagnostic test or therapeutic procedure that represents the costs of performing the service excluding the physician's interpretation or treatment planning. See Professional Component.

Tort Reforms: Efforts to change the procedural and substantive rules for malpractice claims in the court system. Examples include reductions in statutes of limitations, mandatory offsets for collateral sources of payment, caps on non-economic damages, periodic payments of large awards, and limits on attorneys' contingency fees.

Tracer Procedure: A specific procedure that can be used for making comparisons in the pattern of medical care across populations.

Undergraduate Medical Education: The medical training provided to students in medical school.

Upcode: To bill for a service that is paid more than the service actually provided.

Utilization Review (UR): The review of services delivered by a health care provider or supplier to determine whether those services were medically necessary.

Volume (Behavioral) Offset: The change in the volume of services that is projected to occur in response to a change in fees. A 50 percent volume offset means that half of the savings from fee reductions will be offset by an increased volume of services.

Volume Performance Standard (VPS): A mechanism included in OBRA89 to adjust fee updates based on how annual increases in actual expenditures compare to previously determined performance standard rates of increase.

Annual Reports

Annual Report to Congress (1987 through current year available)

Other Annual Reports to Congress

Medicare Volume Performance Standard Rate of Increase for Fiscal Year 1991 (No. 90-1)

Fee Update and Medicare Volume Performance Standards for 1992 (No. 91-3)

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